

1 IN THE CIRCUIT COURT OF THE STATE OF OREGON
2 FOR THE COUNTY OF MULTNOMAH
3
4

5 The Estate of JESSE D. WILLIAMS,)
6 Deceased, by and through)
 MAYOLA WILLIAMS, Personal)
7 Representative,) Vol. 5-A
)
8 Plaintiff,) Circuit Court
) No. 9705-03957
9 vs.)
)
10 PHILIP MORRIS INCORPORATED,)
)
11 Defendant.)

12
13 TRANSCRIPT OF PROCEEDINGS
14
15

16 BE IT REMEMBERED, That the above-entitled
17 matter came on regularly for Jury Trial and was
18 heard before the Honorable Anna J. Brown, Judge of
19 Department No. 7C, of the Circuit Court of the
20 County of Multnomah, State of Oregon, commencing at
21 8:30 a.m., Friday, February 26, 1999.

22 * * *
23
24

25 Reported by Jennifer L. Wiles, CSR, RPR.

1 APPEARANCES:

2

3

James Coon, Attorney at Law,
William Gaylord, Attorney at Law,
4 Ray Thomas, Attorney at Law,
Christopher Tauman, Attorney at Law,
5 appearing on behalf of the Plaintiff;

6

7

James Dumas, Attorney at Law,
Michael Harting, Attorney at Law,
8 Billy Randles, Attorney at Law,
Walter Cofer, Attorney at Law,
9 Pat Sirridge, Attorney at Law,
appearing on behalf of the Defendant.

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

GENERAL INDEX

Page
5
5
151

Friday, February 26, 1999
104 Hearing
Reporter's Certificate

* * *

WITNESS INDEX

FOR THE PLAINTIFF:	Direct	Cross	ReD	ReX
NEAL BENOWITZ, M.D.				
By Mr. Ray Thomas	44			
By Mr. Walt Cofer		63		

* * *

(February 26, 1999)

* * *

P R O C E E D I N G S

* * *

THE COURT: Looks like we are able to go on the record?

THE CLERK: Yes, Your Honor.

THE COURT: All right. Good morning.

COUNSEL: Good morning, Judge.

THE COURT: We'll proceed.

MR. COON: Well, as I understand it, there has been an objection, and I wasn't here to know what it is. I can say what I think it is or maybe the other side can express what it is, whatever the Court's pleasure would be.

THE COURT: Well, for clarity of the record, yesterday afternoon Mr. Thomas made a summary of what it is he wanted to cover with the witness.

And, Mr. Thomas, if you would like to do that again, you may.

Or, Mr. Cofer, you can, simply.

Or whoever. Mr. Dumas, whoever is doing this may take the lead to just state the objections, and then the Plaintiffs can proceed

1 with their offer of proof and argument on the
2 basis of the objections.

3 MR. DUMAS: My brief suggestion, Your
4 Honor, would be that, for purposes of
5 clarification, I think at this time would be
6 preferable if Mr. Thomas succinctly states what
7 he intends that the witness is going to testify
8 about regarding the issues that we objected to.
9 That would serve by way of offer of proof. In
10 the event the Court sustains my objection, then
11 I'll proceed to make a brief introductory comment
12 and then I would like to call Dr. Benowitz to the
13 stand for, I would estimate, ten minutes or so of
14 cross-examination. Tomorrow all right.

15 THE COURT: Would you do that then,
16 Mr. Thomas?

17 MR. THOMAS: Yes, ma'am.

18 THE COURT: Thank you.

19 MR. THOMAS: Well, it was difficult to
20 stray -- to keep from straying into testimony in
21 Defendant's view of the agreement areas, but what
22 I would intend to do today is to go through with
23 Dr. Benowitz the Philip Morris documents relating
24 to studies that they have done in regard to their
25 own cigarettes.

1 And, as you know, I mean, let's put the
2 documents in two packages. One is the RJR
3 report, '88, which isn't in. The other are the
4 internal P.M. documents of their own studies,
5 their own findings. That is a series of -- and I
6 got into it a little bit, but it's a series of I
7 think five exhibits, 92, 117, 126, 149 and 150,
8 all of which, it is my understanding, have been
9 admitted.

10 There were some terms in here that I
11 don't remember how far I was able to get before
12 we sort of agreed to disengage. But I would go
13 through the terms. I would go through what these
14 studies are, what was done. These are all
15 internal P.M. documents. And I would do it in
16 the context of probably doing a sort of a general
17 introduction and just a survey of this concept of
18 pH to the extent I didn't get to finish it
19 yesterday so the jury has some context.

20 Then, and included in that would not be
21 analysis of afferent nerves.

22 THE COURT: Afferent.

23 MR. THOMAS: Afferent nerves or efferent
24 nerves here, ammonia or the concept which the
25 Defendant would like to attribute to Dr. Benowitz

1 that they call bio-availability of nicotine.

2 THE COURT: Let me ask.

3 MR. THOMAS: What we will do is use the
4 vernacular of Philip Morris.

5 THE COURT: Let me ask though this. The
6 evidence in Philip Morris' own documents relative
7 to pH, what's the conclusion or the inference
8 that you hope the jury will draw from that? Help
9 me get the basic?

10 MR. THOMAS: The bottom line?

11 THE COURT: Yes.

12 MR. THOMAS: These guys knew what they
13 were doing. These guys knew all about the
14 different things that can be done to a cigarette
15 to effect impact on the smoker. And they have
16 engaged in a very sophisticated series of on and
17 offshore scientific experiments which -- and this
18 will not be an inference that we can get to with
19 this witness, but in terms of the theme of the
20 case, after other witnesses testify, that this is
21 the tip of the iceberg in terms of what these
22 people have really done in terms of
23 understanding, manipulating, changing turning a
24 tobacco-filled cigarette tube into a Marlboro,
25 which makes it significantly different from what

1 the consumer expectations are about what that
2 thing is that they are lighting up. And that
3 will be in conjunction with our Philip Morris'
4 former staffers.

5 THE COURT: Let me just talk with you a
6 bit to be sure I'm understanding the point of the
7 proffer and where it's going, and then try to
8 understand what the concern is from the defense.

9 And I haven't essentially seen these
10 exhibits to be able to recite or describe them
11 right now for the record, but I'm just assuming
12 these exhibits contain data about pH as it
13 relates to the contents of the cigarette?

14 MR. THOMAS: Yes. And that P.M. affects
15 the impact. I mean that is within their own
16 documents.

17 THE COURT: All right.

18 What I had understood earlier from
19 reading the Defendant's motion was that the
20 defense sought to preclude Dr. Benowitz from
21 offering opinions about the chemical or the
22 chemical mechanism by which pH affects the impact
23 of nicotine upon the smoker. Is that a poor way
24 of stating that? Is that the point that you were
25 getting at earlier?

1 MR. DUMAS: Yes, Your Honor. As impacts
2 relates to addiction.

3 THE COURT: Right. And let me just
4 continue trying to state what I thought the
5 controversy was about in the 104 motion.

6 That the defense sought to preclude any
7 opinion evidence or any expert witness evidence
8 from Dr. Benowitz about the chemistry of the
9 affect of pH upon nicotine and how that plays
10 into the addiction analysis.

11 And, as I understood the Defendant's
12 motion, that was based upon the fact that these
13 various theories which you have told me you're
14 not going into, the afferent nerve theory,
15 bio-availability theory, which you attribute to
16 the Defendant in attributing to the witness but
17 not the witness attributing to the witness, and
18 the effect of ammonia on pH. Plaintiff was not
19 going to go into these three areas.

20 But you are telling me, Mr. Thomas, that
21 you want to offer evidence that Philip Morris, in
22 fact, tested for pH, in fact, in its own records
23 focussed pH as having some kind of impact upon
24 nicotine. And you want to relay to the jury that
25 at least Philip Morris knew there was something

1 about pH and nicotine without going to a chemical
2 explanation from this witness about what his
3 opinions are about how pH and nicotine interact.
4 Am I --
5 MR. THOMAS: That's correct.
6 THE COURT: -- on board there?
7 MR. THOMAS: But --
8 THE COURT: He said I'm correct and you
9 all say I'm not.
10 MR. THOMAS: Well, okay. Maybe help me.
11 MR. COON: I don't want to violate the
12 rule about two lawyers doing one thing.
13 THE COURT: You're talking to me now.
14 That is okay.
15 MR. COON: Okay. I appreciate it.
16 If I could draw a quick diagram to show
17 what we are talking about here, it would go like
18 this.
19 It is a logical sequence. And it starts
20 with I'll call it ammonia and the idea that
21 ammonia causes higher pH and the idea that higher
22 pH causes more free nicotine, also called
23 unprotonated nicotine, and that that has some
24 kind of an effect.
25 Internal documents of Philip Morris say

1 that this causes impact.

2 The theories we agreed not to bring out
3 through Dr. Benowitz would say this causes
4 afferent nerve problems or bio-availability.

5 What their motion said was we don't want
6 you to talk about how ammonia cause pH to go up,
7 and we don't want you to talk about these two
8 things. So, we agree. okay. Not those. Not
9 those.

10 What that leaves is the core silages in
11 the middle. Higher pH means higher free
12 nicotine, means more smoker impact.

13 THE COURT: And your point, Mr. Coon, is
14 that it's not the witness's opinion but that is
15 information that is in Philip Morris documents?

16 MR. COON: If I could read from just one?
17 There are a number of them.

18 THE COURT: I know there are. What I'm
19 trying to get you to commit to is that it's a
20 description of the Philip Morris documents that
21 Plaintiff is trying to get to, not an analysis by
22 the witness of the chemistry of how pH effects
23 free nicotine.

24 MR. COON: We would be asking the
25 witness, for example, to explain the statement in

1 Exhibit 142 where the Defendant is listing
2 accomplishments for 1991 and he says we have
3 demonstrated a systematic relationship between
4 increases in pH and increases in the gas phase,
5 presumably unprotonated nicotine. That is free
6 nicotine. And we have demonstrated that the
7 addition of bases, that means things making smoke
8 more basic, that is a higher pH to cigarettes,
9 enhancing the subjective, that is impact, an
10 electrophysiological responses.

11 THE COURT: Okay.

12 Now, let me stop you again. Because I'm
13 trying to figure out what boxes all of this fits
14 into. If what the Plaintiffs are trying to do
15 today with Dr. Benowitz and these documents is
16 simply, if it can be done simply, to explain to
17 the jury what the documents mean in the context
18 of showing the state of mind of Philip Morris.
19 That is one box.

20 If the Plaintiffs are seeking to show a
21 chemical analysis about how in biochemistry pH
22 effects free nicotine impact effects its
23 predictability, that seems to me another box.

24 And it seems to be that which the
25 Defendants were primarily challenging the

1 underlying science and the reliability of the
2 methodology in an analysis about that chemical
3 analysis. All right.

4 Now, I start from the proposition that
5 the Defendant's documents are the Defendant's
6 documents. Whatever they show they show. If it
7 is helpful to the jury to have someone interpret
8 those documents, obviously the defense can
9 contest that interpretation, but as long as the
10 interpretation is simply a translation of what
11 that means in lay terms, as opposed to a chemical
12 analysis of the chemistry of how that happens.
13 In other words, not replacing the witness's
14 expertise for expertise of Philip Morris as
15 author of the document. That is still in the
16 first box. Am I --

17 MR. COON: We understand. And I don't
18 think there is a problem with the first box.

19 THE COURT: All right.

20 Are you seeking to go to the second box?

21 MR. COON: Yes, for that middle
22 three-part silages, more pH free-nicotine impact.

23 The part they can challenge, and did in
24 their motion, is the part that says ammonia is
25 how you get the higher pH, and the part that says

1 free nicotine causes afferent nerve effects and
2 bio-availability. These are the pieces they took
3 from his prior depositions and challenged and we
4 agreed not bring in.

5 THE COURT: Okay.

6 MR. COON: But, in fact, from free
7 nicotine from higher pH is not the subject, we
8 don't think, to a successful Dalbert challenge.

9 THE COURT: All right.

10 I understand, I think, what the
11 Plaintiff's position is.

12 I would find helpful a little
13 presentation from the defense, and then let's
14 hear from the witness about what the witness
15 would or wouldn't say, and then we can take it up
16 analytically.

17 MR. DUMAS: Thank you, Your Honor.

18 I jotted down a phrase Mr. Coon said
19 which I think is illuminative of this. He made
20 the chemical equation, if you have increased pH
21 that can result in increased free nicotine.
22 There's no dispute about that. It's in the
23 documents. There's no dispute about that.

24 THE COURT: Okay. Good.

25 MR. DUMAS: Then he said and we want to

1 show that this free nicotine has, quote, "some
2 kind of effect," end of quote, on the smoker.

3 Okay. Well, I would submit, Your Honor,
4 that some kind of effect requires underlying
5 scientific validity or it's meaningless.

6 THE COURT: Let me stop you, please, just
7 so that I can track with you. And ask Mr. Coon
8 this question --

9 MR. DUMAS: Sure.

10 THE COURT: -- about that piece.

11 To the extent Plaintiffs are offering
12 statements of the Defendant that free nicotine
13 has an impact, that is an admission.

14 MR. DUMAS: Agreed.

15 THE COURT: The science of which
16 Plaintiff doesn't need to rely on.

17 MR. DUMAS: Agreed.

18 THE COURT: Right, Mr. Coon?

19 MR. COON: I think so. That's right.

20 THE COURT: And there are documents which
21 say that?

22 MR. COON: Yes.

23 THE COURT: All right.

24 To the extent Plaintiffs want to explain
25 the chemical underpinnings of how free nicotine

1 has an impact based upon Plaintiff's own
2 analysis, as opposed to what the Defendant has
3 said in its documents, I think that that is the
4 question. Is that a scientific question for
5 which there needs to be an adequate foundation
6 for the Court to be gatekeeper about?

7 MR. COON: Okay.

8 THE COURT: So, tell me so far are we on
9 course here? All right. Then I'm going to take
10 the floor back away from you and let Mr. Coon
11 explain why we are going with that?

12 MR. COON: Well, I think that is what we
13 will try to do. And again, Defendant's own
14 documents, 1974, the Defendant was suggesting
15 that smoke impact is due to nicotine is nothing
16 new.

17 THE COURT: Okay. Stop there. We don't
18 have a 104 issue about whatever the Defendant has
19 said about the presence of nicotine, that it's in
20 it, tracking pH, all of that. That goes to the
21 Defendant's state of mind, if nothing else.

22 It is not necessarily substantive
23 evidence, but it goes to what Philip Morris was
24 trying to do relative to its awareness of pH and
25 other things. And if that's a nefarious state of

1 mind or it's an innocent manufacturer's state of
2 mind, that is something yet to be developed and
3 evaluated by the jury.

4 Maybe it would be most helpful for the
5 Plaintiff to go ahead and inquire of Dr. Benowitz
6 about this last piece.

7 To the extent Plaintiff wants to offer a
8 scientific explanation outside of Philip Morris'
9 own explanation about how nicotine creates
10 impact, if Plaintiffs wants to do that in the
11 presence of the jury, I want to hear it now and I
12 want to hear the foundation for it. I want to
13 give the defense a chance to cross, and then I
14 think we have packed it in a way we all can
15 understand.

16 MR. COON: Could we have a moment to
17 discuss how we expect to do that?

18 THE COURT: Absolutely. Take a minute
19 and do that.

20 Mr. Dumas, is that all right with you?

21 MR. DUMAS: That is fine.

22 THE COURT: Okay. A minute or two.

23 Good morning, Doctor.

24 THE WITNESS: Good morning.

25 THE COURT: Are we still going to proceed

1 then with an offer?

2 MR. THOMAS: Yes.

3 MR. COON: Mr. Thomas will do that.

4 THE COURT: Okay.

5 MR. THOMAS: It might be of assistance --

6 I can't get the thing to work. We are there now
7 okay. All right.

8 Judge, this is their own table from

9 Exhibit 149. All right.

10

11 DIRECT EXAMINATION

12

13 BY MR. THOMAS:

14 Q. Dr. Benowitz, this is a summary
15 proceeding. So, I'm going to ask you a question in
16 terms of what the Philip Morris documents show in
17 terms of pH and nicotine delivery, and I'm looking
18 at this chart, which if you cannot see very well
19 from where you are you could come down to the
20 monitor where I have it here.

21 A. Yeah. I would actually have to see the
22 document because I'm not sure exactly what you are
23 referring to.

24 Q. All right. Let me show you Exhibit 149.
25 And what may make it faster is I'll give you 117,

1 126, 142, and 150.

2 MR. PEDERSON: What was that?

3 MR. THOMAS: 142 and 150.

4 THE WITNESS: Well, this figure actually
5 is not directly relevant to the point. The
6 figure basically shows that the pH does not
7 effect the nicotine delivery by the smoking
8 machine test.

9 BY MR. THOMAS:

10 Q. All right. Now, in regards to the effect
11 that pH has upon smoker impact now, not the level
12 of nicotine on the smoking machine, but in terms of
13 the impact on the smoker, do the Philip Morris
14 documents demonstrate at least a concern within
15 Philip Morris about the answer to that question?

16 A. Well, yes. I will say there are other
17 documents in Philip Morris, and it's well known in
18 the whole scientific community that when you change
19 pH you change the balance between free nicotine and
20 bound nicotine so that is something which is known
21 by the scientific field and is not contested by
22 anybody.

23 And there are figures showing that in the
24 Philip Morris documents. This document and another
25 documents show that when you increase pH of a

1 cigarette there's greater impact on the smoker and
2 there are greater brain wave effects, given the
3 same nicotine delivery.

4 So, this figure shows that they are the
5 same nicotine delivery but in spite of that
6 delivery.

7 Q. That is the delivery through the end,
8 through the smoking machine in terms of quantity of
9 nicotine?

10 A. Right. So, this figure shows that
11 delivery is the same regardless of pH. There are
12 other data. And there's no figure for that to show
13 that, despite the same nicotine delivery, the
14 impact is greater and the brain wave effects are
15 greater with higher pH.

16 MR. THOMAS: And then --

17 There's an intention between not wanting
18 to put my best questions forward but wanting to
19 cover the area.

20 THE COURT: Well, let's just look at it
21 this way, Mr. Thomas. You know, if you want it
22 in, maybe you need to do your best now so I can
23 get it.

24 MR. THOMAS: Okay.

25 THE COURT: Right.

1 BY MR. THOMAS:

2 Q. 3In regard to the areas of consideration
3 regarding how to effect impact without effecting
4 what the smoking machine sucks out in terms of
5 nicotine, was pH something that Philip Morris
6 examined?

7 A. Yes. PH is something they examined in
8 this document, and they also interpreted it to say
9 that we interpret that the greater effect is a
10 consequence of more free nicotine. That is what
11 their documents state. And that is what most
12 scientists believe, as well.

13 Q. And has pH determined that increased
14 impact is connected with the changes in physiology
15 within the smoker's body?

16 A. Well, they have determined both things in
17 the smokers, one that there is greater impact, and,
18 second, that there are greater effects on brain
19 wave activity.

20 Q. All right.

21 Now, in regard to what effect increasing
22 brain wave activity, increasing impact would have
23 for a person who is addicted or habituated to
24 nicotine for a cigarette with a greater impact,
25 relative to a cigarette with a lower impact, what's

1 the difference going to be?

2 A. Well, these are nicotine effects, and the
3 greater the impact or greater the brain wave
4 effects would mean more nicotine action and would
5 make cigarettes potentially more addictive.

6 Q. And for a person who is sucking the
7 nicotine from the cigarette would the higher brain
8 wave activity result in more impact from an
9 individual drag felt by the smoker?

10 A. Yes.

11 Q. One more now.

12 If a company was trying to create a
13 product where they knew that somebody was going to
14 put a little vacuum cleaner on the end of the
15 cigarette and suck it and have a measurement of
16 nicotine, but they wanted to increase the impact
17 and thereby increase their market share without the
18 nicotine delivery figures being higher at the end,
19 would one way to do that be to conduct tests both
20 here and abroad to determine what could be done to
21 change pH so that there would be a greater impact
22 upon the smoker but it wouldn't be detectable by
23 the machine?

24 A. Yes.

25 Q. How do you know that increased impact

1 equals increased addictive effects?

2 A. Well, internal documents of Philip Morris
3 talk about smoker's satisfaction, and satisfaction
4 clearly is one of the things that gets people to
5 smoke cigarettes. A lot of satisfaction is related
6 to actions of nicotine, and the brain wave effects
7 are felt by almost everyone to be a key part of the
8 addictive nature of cigarettes by nicotine.

9 So, I think there's no question that
10 having greater impact, greater satisfaction,
11 greater brain wave activities would make cigarettes
12 potentially more addictive.

13 Q. And when you say almost everyone, are you
14 including in that the scientific and medical
15 community?

16 A. Yes. I think most everyone except for
17 the tobacco industry, maybe, you know, a handful of
18 other scientists, but the vast majority of
19 scientists accept this without much of a question.

20 Q. And in terms of I guess just one more
21 term for the Judge that I want to go into is in
22 Exhibit 142, electrophysiological responses which
23 is mentioned in regard to the systematic
24 relationship between increases in filler pH and
25 increases in gas phase, presumably unprotonated

1 nicotine, in terms of the impact on the smoker.
2 Electrophysiological responses, those
3 relate to impact?

4 A. No. Electrophysiological responses are
5 the brain wave responses. The subjective responses
6 are the impact.

7 Q. And it's within Exhibit 142 that Philip
8 Morris has demonstrated that the addition of bases,
9 in other words that means alkali, the greater pH
10 the substance?

11 A. Yes. Yes.

12 Q. To cigarettes, it enhances both the
13 subjective and the electrophysiological responses?
14 That is within their own document?

15 A. Yes.

16 Q. All right.

17 THE COURT: Okay.

18 Cross on this topic.

19 MR. DUMAS: Thank you, Your Honor.
20
21
22
23
24
25

CROSS-EXAMINATION

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

BY MR. DUMAS:

Q. Doctor, you are a respected physician and scientist; correct?

A. I hope so.

Q. Okay. You said several times that increased pH results in increased free nicotine, and the result of increased free nicotine is that it increases the impact on the back of the throat; correct?

A. Yes.

Q. Okay. And then you said quote, "that means the cigarette potentially would be more addictive."

Doctor, can you tell this Court under oath, to a reasonable medical probability, not a hypothesis, not a theory, a reasonable medical probability, that there is scientific research and data that substantiates that greater impact in the back of the throat results in increased addiction to tobacco and nicotine?

A. Well, it's hard to --

Q. Doctor, please answer the question yes or no and then explain your answer.

1 THE COURT: He's trying to, Mr. Dumas.
2 You need to let him please finish, and then you
3 can pursue it.

4 MR. DUMAS: All right.

5 THE COURT: Go ahead, Doctor.

6 THE WITNESS: It's clear that nicotine
7 effects determine the addiction. And nicotine
8 effect are multiple.

9 Now, I don't know anyone who has
10 parcelled out which effects of nicotine are more
11 responsible for addiction than other effects.

12 Clearly, brain wave effects would be
13 logical since that is the site of where the
14 addiction occurs.

15 Clearly, nicotine impacts sensation of
16 smoking, as well, and it would make sense that
17 part of the nicotine packing that people get
18 include both parts of it.

19 I am not able to provide any information
20 saying that any one effect of nicotine or data,
21 one effect of nicotine is responsible for
22 addiction, as compared to other effects, but we
23 know that nicotine in general is, and these are
24 multiple effects of nicotine.

25 BY MR. DUMAS:

1 Q. So, in other words, Doctor, the answer to
2 my question is you cannot cite to this Court any
3 research or data that substantiates that the
4 greater the impact results in greater addiction to
5 tobacco or nicotine?

6 A. I can't think of any studies.

7 Q. Thank you, Doctor.

8 Now, the notion of greater impact in the
9 back of the throat as a result of free nicotine is
10 not a new concept, is it?

11 A. No.

12 Q. It's been published in the literature
13 since the '30s and '40s; correct?

14 A. Yes.

15 Q. All right. Nothing secret about that, is
16 it, Doctor?

17 A. No.

18 Q. All right.

19 And relatively recently, Doctor, in a
20 substantial number of depositions and courtroom
21 testimony you have posited theories in order to
22 explain some physiological reaction that links
23 impact to addiction; correct? You have tried to
24 posit such theories; correct?

25 A. Yes.

1 MR. THOMAS: Objection to the form of the
2 question.

3 MR. DUMAS: This is cross-examination.

4 THE COURT: Mr. Dumas, and folks, I'm not
5 going to keep doing this. You have got to let
6 objections be made. And I do not want you
7 engaging each other. You talk to me or not at
8 all.

9 MR. DUMAS: Yes, Your Honor. I
10 apologize.

11 THE COURT: Mr. Thomas.

12 MR. THOMAS: Objection. It's
13 argumentative.

14 THE COURT: Overruled. It is cross.
15 Go ahead, Mr. Dumas.

16 BY MR. DUMAS:

17 Q. And you have testified regarding the
18 possibility of a theory of bio-availability to
19 possibly explain how greater impact might result in
20 increase addiction; correct?

21 A. Yes.

22 Q. And you have testified relatively
23 recently on a substantial number of occasions that,
24 in fact, there is no scientific research or data to
25 support that hypothesis?

1 A. Correct.

2 Q. All right.

3 So, you would agree with me on that one?

4 A. Yes.

5 Q. All right.

6 And then last year, 1998, you testified
7 for the first time where you posited a new theory
8 or hypothesis that perhaps this link between impact
9 in addiction might be explained by something that
10 you coined afferent nerve stimulation; correct?

11 A. Well, the substance of your statement is
12 correct. The afferent nerve stimulation is not
13 something I coined. There is long scientific
14 literature on afferent nerve stimulation.

15 Q. Correct.

16 A. Afferent nerve stimulation.

17 Q. Involving such things as drinking soda
18 pop and beer?

19 A. Not many so much of that. But a number
20 of, you know, the afferent nervous system is a
21 major part of the body's nervous system, and we
22 have discussed nicotine and other drugs for many
23 years understanding the contribution of afferent
24 nerve stimulation to the effects on the body. It's
25 not a whim. It's not a fantasy. There is no

1 literature on afferent nerve pharmacology.

2 Q. I know.

3 Doctor, let's take a step back.

4 Bio-availability. The inherent concept of
5 bio-availability is that increased free nicotine
6 results in increased pharmacological effects of
7 nicotine. That increased pharmacological effects
8 get into the blood stream, in essence, for it then
9 to get to the brain, and has greater impact on the
10 brain?

11 A. Well, sort of. It's a bit confused. But
12 the general inference what you are saying is
13 correct.

14 Q. And that is based on sort of a
15 traditional notion of pharmacological activity,
16 that is, a substance gets into the bloodstream and
17 gets to the brain; right?

18 A. Yes.

19 Q. Okay.

20 You have already testified that there's
21 no research to support that theory with regards to
22 nicotine and addiction. The afferent nerve theory
23 that you have posited last year with regards to
24 nicotine, not the general concept of afferent nerve
25 stimulation, but afferent nerve stimulation as it

1 relates to nicotine and addiction, went in an
2 entirely new direction from traditional
3 pharmacological responses; correct?

4 A. Not exactly.

5 Q. Okay.

6 A. Dr. Heinz Ginzel actually published
7 research back in, I think, the '70s where he was
8 arguing that this is an important aspect of
9 nicotine effects.

10 Q. Doctor, the bio-availability theory, the
11 foundation of it is a substance going to the brain
12 from the circulatory system; correct?

13 A. Yes.

14 Q. Okay. The theory you posited last year
15 was a new direction and away from bio-availability,
16 which posited the notion that perhaps increased
17 impact in the back of the throat effected the
18 peripheral nerves back there which resulted in some
19 sort of electrical stimulation going to the brain?

20 A. That's correct.

21 Q. Right?

22 A. That's correct.

23 Q. In essence, getting to the brain before
24 the nicotine that you inhale gets to the brain and
25 gets up to the brain in the traditional fashion?

1 A. That's correct.

2 Q. All right.

3 So, it's markedly different in concept
4 from bio-availability?

5 A. Yes.

6 Q. All right.

7 In subsequent depositions and in
8 testimony, you have acknowledged that there is no
9 scientific research or data that substantiates the
10 validity that the afferent nerve stimulation theory
11 applies to nicotine or results in increased
12 addiction as a result of consumption of nicotine;
13 correct?

14 A. Not exactly. I said there is no evidence
15 in humans that it plays a role in addiction. I
16 actually did cite several studies and provided them
17 to the tobacco industry, I don't know which
18 attorney, on animal studies which are highly
19 supportive of that concept.

20 What I did say is that it has not been
21 proven in humans to play a role in addiction, but
22 there's good scientific foundation for why it's
23 likely to be the case.

24 Q. Okay.

25 So, I mean, it's a hypothesis, and it's

1 been worked on and a lot of work needs to be done
2 on it if it's going to go anywhere; correct?

3 A. I think more work should be done on it,
4 yes.

5 Q. And the fact of the matter though is,
6 Doctor, the presentation of knowledge here today,
7 in 1999, there is insufficient scientific data and
8 research to say, to a reasonable medical
9 probability, that addiction is increased because of
10 afferent nerve stimulation from free nicotine in
11 the back of the throat?

12 A. Well, I actually think it's highly
13 likely. But it does require an extrapolation of
14 researching animals and basic science as to what is
15 going on in people, but it would explain the
16 results that have been shown by Philip Morris
17 research with cigarettes of different pH,
18 explaining why you increase pH you get increased
19 subjective effects and you get increased brain wave
20 effects, while you are not effecting the total
21 nicotine to the smoker.

22 I mean, that is, you know, an observation
23 which you made, and my theory which is
24 well-supported by animal research would support
25 that and explain that, and I think it's highly.

1 Q. You think it's highly likely, but, in
2 fact, Doctor, that is your personal theory. There
3 is no published peer review literature that
4 supports the afferent nerve theory as it relates to
5 human addiction in nicotine?

6 A. No, but I can guarantee you that, you
7 know, if I write it up and make an argument to it,
8 it will be published because it's very logical and
9 makes sense.

10 Q. You can guarantee that?

11 A. Well, not 100 percent, but highly likely.

12 Q. All right.

13 You agree that there are no peer review
14 publications supporting afferent nerve theory as it
15 relates to human addiction and nicotine?

16 A. Well, even their Dr. Gedrose, who is a
17 scientist whom the tobacco industry likes to cite a
18 lot, has published a lot on the importance of
19 sensory stimulation and why people smoke
20 cigarettes. And I think his work is also
21 consistent with the concept that sensory
22 stimulation is an important component of behavior,
23 of smoking behavior, and he hasn't dealt
24 specifically with the nicotine afferent nerve, but
25 he has done a lot with sensory stimulation and

1 cigarette effects, and I think that is also
2 consistent with the afferent nerve hypothesis.

3 Q. But his study did not deal with nicotine,
4 did it?

5 A. Well, he has dealt with nicotine but not
6 specifically to address this hypothesis.

7 Q. And his studies did not conclude the
8 afferent nerve theory applies to nicotine and
9 addiction in humans?

10 A. Not that I recall, that's correct.

11 Q. All right.

12 And, Doctor, you would not be able to
13 cite to this Court the potential rate of error in
14 the afferent nerve theory with regard to nicotine
15 and human addiction, can you?

16 A. Well, I'm not sure what that means, but
17 no, I don't have any quantitative numbers like
18 that.

19 Q. All right. And you can't cite to this
20 Court any objective standards for the evaluation of
21 this theory as it relates to human addiction and
22 nicotine use?

23 THE COURT: Mr. Dumas, I don't hear that
24 the Plaintiff is offering the theory. So, maybe
25 this line of questioning is not helpful.

1 MR. DUMAS: My point, Your Honor, would
2 be, if I may, is that if there is no scientific
3 basis, if there is no scientific theory to link
4 impact with addiction, then the Court should not
5 allow his testimony in any respect with regard to
6 the linkage.

7 THE COURT: Let me tell you where I am
8 right now so you can focus your questioning on
9 something that you think might be helpful.

10 MR. DUMAS: Okay.

11 THE COURT: The witness is qualified to
12 testify about the contents of Philip Morris
13 documents regarding the presence of pH, what
14 appears to the witness to be a trend in upward
15 concentration in pH. And the analysis of what
16 Philip Morris did is admissible against Philip
17 Morris.

18 He is a helpful tool to the jury to
19 understand that material. He can talk about all
20 of that.

21 He cannot interpret so far the science by
22 which those observed outcomes in Philip Morris
23 notes in its own documents occurs.

24 That they occur is an inference on which
25 Plaintiffs can proceed.

1 That they may be malevolently manipulated
2 may be something that we'll have evidence about.

3 But right now it seems to me the witness
4 is absolutely able to help this jury understand
5 what these five exhibits mean in terms of there
6 is increased pH, it does have an impact on
7 nicotine delivery, and Philip Morris was focussed
8 on the impact of pH relative to nicotine.

9 All of that comes in, unless the defense
10 opens the door in the cross-examination to the
11 how that happens.

12 It sounds like Plaintiffs aren't even
13 going down the road of bio-delivery or afferent
14 nerve stimulation.

15 It is an explanation this witness has
16 developed from his expertise and may ultimately
17 prove admissible in court at some point. But
18 nobody is offering it yet.

19 And we are spending ten minutes debunking
20 it when it is not helpful to what needs to come
21 in.

22 So, what I need to have you do,
23 Mr. Dumas, is tell me what, other than what you
24 have just covered, you believe is inadmissible,
25 what you are concerned about that the Plaintiff

1 may be doing so that I can narrow the scope and
2 we can be sure to get everybody clearly on track
3 before we have to bring the jury in.

4 MR. DUMAS: I was just about finished
5 with this argument, Your Honor.

6 THE COURT: Sorry.

7 MR. DUMAS: Philip Morris documents stop
8 right here at impact. As I heard the Doctor's
9 testimony it got a little gray, and it got a
10 little fuzzy. He wants to make the next step
11 down to increased addiction. That is where the
12 science doesn't exist, and this man has
13 acknowledged that on the stand. So, I have no
14 further --

15 THE COURT: Well, I didn't hear Mr.
16 Thomas ask the specific question whether he has
17 an opinion based upon reasonable medical
18 probability that the upward manipulation of pH in
19 a Philip Morris cigarette ultimately increases
20 addiction.

21 I believe that is a conclusion and an
22 inference he wants the jury to draw ultimately,
23 and he maybe will have enough evidence in the
24 record at the end of the Plaintiff's case to
25 argue that to the jury.

1 But we don't need to spend time right now
2 on the witness's competent opinions about how
3 that happens because nobody is offering that.

4 MR. DUMAS: Your Honor, perhaps I
5 misunderstood the doctor's testimony in the offer
6 of proof. I understand they are not going to say
7 afferent nerve stimulation. I understand they
8 are not going to say bio-availability. And if
9 this witness is not going to connect impact to
10 increased addiction, I have got no problem.

11 THE COURT: I understand the defense is
12 sensitive to that linkage. What I'm saying is I
13 didn't hear a direct opinion question posed to
14 the witness that increasing pH means increase the
15 addiction. I know that is an inference they want
16 the jury to draw, ultimately, and we will
17 carefully listen to the form of each question and
18 answer.

19 But right now Mr. Thomas is free to
20 explore fully with the witness so that the jury
21 can be helped in understanding these five
22 exhibits.

23 And to the extent the advocate ultimately
24 in argument can link his testimony yesterday
25 about how satisfaction and addiction mean the

1 kind of nefarious thing they are seeking the jury
2 to conclude, that is for an advocate, but right
3 now nobody asked the offending opinion of the
4 witness.

5 He's not going to talk about
6 bio-availability or afferent nerve theories on
7 the Plaintiff's case.

8 If the defense opens it, however, and I
9 don't want to predict where things are going, but
10 there may be a basis upon which the witness will
11 then be allowed to explain why he is answering
12 the way he is, in response to the defense
13 questions. The Plaintiffs won't go there though.

14 MR. DUMAS: One final point, Your Honor.

15 Whether you call it afferent nerve
16 stimulation or you call it bio-availability or
17 whether you just call it something else, the
18 point of this motion is that, whether it be by
19 direct question or by the physician's own
20 testimony, he should not be allowed, because the
21 science is not there, to equate greater impact
22 with grater addiction. That is the point of the
23 motion.

24 THE COURT: He won't be allowed to do
25 that directly.

1 MR. DUMAS: Okay. Very well.

2 THE COURT: He is allowed in his
3 expertise to explain Philip Morris' interest in
4 pH, Philip Morris' data about pH. The chemistry
5 of that. Plaintiffs have agreed not to talk
6 about ammonia, and are not going to talk about
7 the two other things.

8 And, Mr. Coon, what do you want to add
9 now?

10 MR. COON: Well, Your Honor, I suppose I
11 need to clarify impact has it's been unclear.

12 THE COURT: Impact is Philip Morris'
13 word. You told me that.

14 MR. COON: And it refers to a sensation
15 in the throat.

16 THE COURT: Well, the witness is going to
17 be allowed to explain the documents, but I'm not
18 going to allow the witness to go into a chemical
19 explanation about how he thinks increasing pH
20 means increasing addiction because we can't go
21 there.

22 MR. COON: It's not a chemical
23 explanation. His own testimony with respect to
24 this would be, I think, that a physical
25 sensation, like many other physical sensations,

1 surrounding smoking is related to addiction that
2 the smoker experiences.
3 THE COURT: He talked about that
4 yesterday. That is already in the record.
5 MR. COON: And just so that is not
6 barred, that is fine.
7 THE COURT: It's in the record already.
8 MR. THOMAS: Thank you for your concern,
9 however.
10 THE COURT: And help.
11 MR. COON: I'll get out of here.
12 THE COURT: Now, you are not doing the
13 cross?
14 MR. DUMAS: No. Mr. Cofer is.
15 THE COURT: And he wasn't in here. So
16 you may want to talk with him.
17 MR. DUMAS: Thank you for the Court's
18 observation.
19 THE COURT: Okay.
20 Are we ready for the jury?
21 MR. THOMAS: May we step out?
22 THE COURT: Two minutes. Then we'll
23 bring the jury in, if we have a jury.
24 And you will you go count?
25 * * *

1 (Whereupon, the proceedings continued,
2 in open court, as follows:)

3 * * *

4 THE COURT: Everybody prepared?
5 Mr. Cofer?

6 MR. COFER: I am, Your Honor.

7 THE COURT: Are we ready for the jury?

8 MR. THOMAS: Yes.

9 THE COURT: Bring them in, please.

10 * * *

11 (Whereupon, in open court, in the jury's presence,
12 the proceedings continued, as follows:)

13 * * *

14 THE COURT: Better, Ms. Dewees, the
15 chair?

16 JUROR DEWEES: Yes. Thank you.

17 THE COURT: Go ahead and just take a
18 seat, sir.

19 Mr. Thomas.

20 All right.

21 Good morning, jurors.

22 All right. We are ready to continue with
23 the direct testimony of Dr. Benowitz.

24 Mr. Thomas.

25 MR. THOMAS: Thank you, Judge.

DIRECT EXAMINATION

BY MR. THOMAS:

Q. Dr. Benowitz, as the jury was filing in, did I ask you to create the beginning of a diagram to get us oriented for the consideration of pH and nicotine impact?

A. Yes.

Q. All right.

Could you, please, step forward? Could you, please, show the jury what the entries are on this chart as they relate to nicotine?

A. Okay. As we talked about yesterday, there are two phases of tobacco smoke. One are the particles which form the mist of the aerosol. And the second is the vapor. And nicotine can be present in both parts.

Most nicotine is in a particle, which is the sort of tar particle.

And then there's a small amount of nicotine free base in the vapor or gas phase.

And the question that comes up is what influences the amount of free nicotine or free base nicotine that is in the gas phase, and one of the

1 main factors that influences it is the acid base
2 balance of the smoke or the pH.

3 So that in acidic smoke with a low pH
4 there is more nicotine in a particle and there's
5 less free nicotine in the gas phase.

6 In alkaline smoke or a higher pH smoke
7 more nicotine moves out of the particle into the
8 free base form and so there are higher
9 concentrations of nicotine in the vapor or gas
10 phase. So that is one of the important effects of
11 pH on cigarette smoke and nicotine.

12 Q. And just sort of generally speaking, in
13 terms of what Philip Morris has done internally,
14 have they studied the effects of the different
15 forms of the particles in terms of the effect that
16 that may have upon impact to the smoker?

17 A. They have studied the effects of
18 different things that change pH of cigarettes on
19 impact.

20 Q. And I would like then to go to the actual
21 documents and have you, please, describe to us some
22 of the terms and some of the concepts that they
23 were doing within their laboratories?

24 A. Yes.

25 Q. First of all, has Philip Morris conducted

1 animal tests upon rats to study the effect of
2 nicotine upon animals and also upon other mammals
3 such as humans?

4 A. Yes.

5 Q. And did they have a researcher, and this
6 isn't Exhibit 117, named Victor Denoble? And this
7 is a 1981 document, interoffice correspondence,
8 personal and confidential to Dr. Dunn with Victor
9 Denoble's name on it, 117.

10 Did they have a researcher named Victor
11 Denoble?

12 A. Yes.

13 Q. Was he one of the researchers in their
14 behavioral pharmacology laboratory?

15 A. Yes, he was.

16 Q. And that was at least one of the
17 laboratories that did research upon rats; is that
18 correct?

19 A. Yes.

20 Q. I'm going to show you what has been
21 marked and admitted as Exhibit 126. It has a sort
22 of obviously plastic cover with a hole in it that
23 is the face, but it says Behavioral Pharmacology
24 Annual Report. Is that 1981, I think? It is 1981.

25 MR. COFER: Thank you, counsel.

1 BY MR. THOMAS:

2 Q. I'm going to direct your attention to
3 Page 1 of the actual report. And the question is,
4 within Philip Morris, does this reveal some of the
5 areas of inquiry?

6 And here is the quote. "Some specific
7 objectives addressed in this report are, 1, to
8 develop a behavioral profile of the reinforcing
9 effects of nicotine and acetaldehyde."

10 And then there are two or three subsets,
11 two of which I think concern us here.

12 "2, to find a ratio of acetaldehyde to
13 nicotine that will have optimal reinforcing
14 effects."

15 Now, that term optimal is something that
16 we have come upon before, but what about
17 acetaldehyde?

18 A. Acetaldehyde is a small chemical that is
19 generated in the tobacco burning process. It also
20 is the major breakdown product of alcohol in the
21 body. Acetaldehyde does have pharmacological
22 activity and thought to contribute to some of the
23 effects in alcohol abuse, as well.

24 Q. But we know now, I think, what
25 psychogenetic effects and those words mean. So,

1 I'm not going to break it down because I think we
2 have learned that.

3 In terms of optimal reinforcing effects,
4 what is this concern within Philip Morris?

5 A. Well, first, I probably should explain
6 what these studies are in terms of reinforcing
7 effects in animals.

8 One of the important tests that people do
9 to try to look at whether drugs can be used is to
10 see if animals will actually do things to give
11 themselves the drugs. Like when a person can
12 obviously get a drug and take it, but there are
13 ways to do studies with animals where they press
14 levers or do some behavior in order to give
15 themselves the drug, and that is a way just to test
16 if a drug is reinforcing.

17 Reinforcing means will an animal do
18 something to get the drug?

19 And it was shown by this research group
20 first that rats will press a lever to give
21 themselves nicotine. So, that is reinforcing.
22 That is consistent with the idea of nicotine being
23 abused.

24 They also show that animals will press a
25 lever to give themselves acetaldehyde, which is

1 another component of cigarette smoke.

2 And then the question of optimal
3 reinforcement is what actually increases behavior
4 to get a drug the most? What combination or what
5 drug dose or something is such that an animal will
6 do more work than anything else to get the drug?
7 In other words, what would make it more abusable?

8 And what he found is actually the
9 combination of acetaldehyde and nicotine together
10 made animals press these bars more than either one
11 alone or even what you predict by just adding the
12 two together.

13 So, there is sort of a combination effect
14 of nicotine and acetaldehyde. So, these studies
15 are very important in terms of understanding the
16 possible reinforcing effects in people. And why do
17 people smoke cigarettes?

18 Well, maybe they might be doing it for
19 the same reason that the lab rats are pressing a
20 bar.

21 Q. And if a human does with the cigarette
22 what a rat does with a bar, does that mean making
23 the decision to light up instead of throw it away?

24 A. Yes.

25 Q. Okay.

1 And in terms of, B, to examine the
2 potential physical dependence producing property of
3 acetaldehyde. What is physical dependence
4 producing properties?

5 A. Well, physical dependence refers to
6 whether, when a person or an animal has been
7 exposed to a chemical for a period of time, and
8 then we stop the exposure, whether there are
9 withdrawal symptoms.

10 Like we talked about before. You know,
11 if you're an alcoholic and you stop alcohol you get
12 shaky. You can have DTs. You can have
13 convulsions. So, when they stop smoking
14 cigarettes, they get irritable. They have trouble
15 concentrating or thinking. They may have sleep
16 disturbance.

17 So, when there's some disruption of
18 function, in the absence of a drug, when you have
19 been exposed to it before, that is physical
20 dependence.

21 Q. And in terms of rats, when rats become
22 programed or habituated or addicted to the dose
23 response of nicotine, and they don't get it, are
24 they studying what happens to the rats in terms of
25 the physical dependence?

1 A. Yes.

2 Q. Now, I'm looking for the chart about the
3 test machine. This vacuum cleaner pulls the smoke
4 out. When the nicotine content gets measured, is
5 acetaldehyde on this scale here?

6 A. No.

7 Q. So, acetaldehyde producing optimal
8 reinforcing effects wouldn't be visible from the
9 smoke?

10 A. No.

11 Q. And in terms of if a person was going to
12 want to see what really gets put into these, I
13 guess, there's nothing on here that says what the
14 ingredients are?

15 A. No, there are no yield data on cigarette
16 packs in the U.S.

17 Q. And, I guess, it doesn't say what the
18 contents are either?

19 A. No.

20 Q. Okay.

21 I think we looked at this yesterday but
22 then got interrupted. Let me just make sure I have
23 got it focussed. Okay. I'll do as best as I can
24 with this.

25 1992. 1991 Accomplishments. Right here

1 is the one.

2 "Demonstrated a systematic relationship
3 between increases in Philip pH and increases in gas
4 phase presumably unprotonated nicotine."

5 What does that mean that they
6 accomplished?

7 A. Well, that is really as I showed in that
8 diagram a minute ago. If you increase pH you can
9 increase vapor phase which is also known as free
10 base nicotine, which is also known as unprotonated
11 nicotine. So, what they are saying is what that
12 diagram shows.

13 Q. All right. I just can't let this go.
14 And in terms of this next one, I'm going
15 to try to get it in as big as we can.

16 "Demonstrated that the addition of bases
17 -"

18 Now, bases are alkaline; right?

19 A. Yes.

20 Q. Okay. High pH?

21 A. Yes.

22 Q. Okay.

23 -- "to cigarettes enhances subjective and
24 electrophysiological responses."

25 What does that mean?

1 A. Well, subjective responses are how the
2 person perceives the strength of the cigarette. So
3 they perceive the cigarette as being a stronger
4 cigarette, having more impact.

5 Electrophysiological effects are the
6 brain wave test that we talked about yesterday.
7 So, there's more effect on brain waves with
8 cigarettes with higher pH.

9 Q. Well, again, go back to our smoking
10 machine. Does our smoking machine tell us
11 cigarette A versus cigarette B? Oh, well,
12 cigarette B has got bases added to it. We can tell
13 by what the meter shows on the smoke sucker
14 machine.

15 A. No, there's no information on the yield
16 data that are provided to the consumers about pH.

17 Q. Well, in terms of the impact that the
18 smoker feels, enhancing subjective and
19 electrophysiological responses, is that a concept
20 that is connected with the smoker subjective
21 electrophysiological responses?

22 A. These are some of the effects that a
23 smoker gets from smoking a cigarette.

24 Q. Okay. Well, let's just in terms of the
25 electrophysiological has to do with demonstrable

1 physiological changes?

2 A. Right. That is the brain wave activation
3 effects, the stimulation effects.

4 Q. All right.

5 Now, let's not say that I'm the most
6 addicted smoker or the least addicted smoker, but
7 let's say I'm the middle of the road smoker. Okay.
8 Okay. I'm just having a cigarette after my meal.
9 Well, what are the subjective responses that I
10 might have?

11 I'm not a new smoker where, you know, I
12 take it and I kind of gag. You know. I have been
13 smoking for awhile.

14 What are some of the subjective responses
15 that I might have?

16 A. Well, when you smoke a cigarette, there
17 is a little bit of a bite or people talk about it
18 in different ways, but there's a feeling that is a
19 slightly biting feeling that is a consequence, a
20 part of nicotine that occurs in the mouth and the
21 chest.

22 Q. Does that come to be associated with
23 what's going to happen next in terms of feel the
24 bite and then within about ten seconds feel the
25 nicotine?

1 A. It's part of the bite, part of the taste,
2 part of the sensation of smoking a cigarette. As
3 we talked about yesterday, this becomes a very
4 important conditioned aspect of smoking. The brain
5 wave effects has to do with the stimulate effects.

6 The person smokes the cigarette. They
7 feel more stimulated, more alert, whatever. So
8 that is the other part that we talked about
9 yesterday in terms of stimulation. So, that these
10 are just two of the aspects of what the smoker
11 experiences when smoking a cigarette.

12 Q. Well, from the standpoint of a
13 manufacturer of cigarettes, that you increase the
14 impact, what does that do in terms of the
15 likelihood that a smoker is going to choose, this
16 cigarette that has a high impact versus another
17 cigarette or it's going to decide that this is
18 going to be the last one I smoke versus well maybe
19 I'll just smoke one more?

20 A. A lot of smokers like the impact part of
21 it and they like the effects that gets -- that
22 correspond to brain wave activity. And many
23 smokers may find that this cigarette is a cigarette
24 that they would like to smoke.

25 Q. Thank you.

1 And going to June, 1994, 149.

2 MR. COFER: Thank you.

3 BY MR. THOMAS:

4 Q. Is this a study entitled The Effects of
5 Cigarette Smoke PH on Nicotine Delivery and
6 Subjective Evaluations?

7 A. Yes.

8 Q. And does this discuss the concept that we
9 just described, the same amount of nicotine is
10 delivered whether the smoke is acidic, base or
11 neutral; only the form not the amount of nicotine
12 is changed?

13 A. Yes.

14 THE COURT: Mr. Thomas, would you
15 approach, please?

16 MR. THOMAS: Yes.

17 BY MR. THOMAS:

18 Q. Continuing, "It was found that higher
19 peak concentrations of nicotine in blood were
20 achieved at higher pHs. Since the amounts of
21 inhaled nicotine were same, the results indicate
22 that the higher the pH the more rapidly nicotine
23 enters the bloodstream.

24 "Eventually, of course, all of the
25 nicotine regardless of pH would enter the

1 bloodstream. Only rate of entry is pH dependent."
2 Now, in regard to application of that
3 finding, the idea of -- I think we're beyond the
4 possibility of confusion in regard to amounts of
5 inhaled nicotine. We got that. That is what they
6 get from the smoke.

7 But in regard to the results which
8 indicate that the higher the pH the more rapidly
9 the nicotine enters the bloodstream and only the
10 rate of entry is pH dependent. What does that
11 mean?

12 A. Well, this study actually involves
13 nicotine aerosol. It's not a cigarette.

14 Q. All right. But in terms of -- all right.
15 So, can you make -- can you translate that over to
16 the application of a cigarette?

17 A. Well, not directly, actually.

18 Q. All right.

19 Let's go down to the bottom of it.

20 "We found that increased filler --"

21 Now, what's filler?

22 A. Well, these are cigarette studies. This
23 has to do with change in pH of some of the
24 constituents of the cigarette.

25 Q. So, the filler is the stuff inside of

1 here?

2 A. Yes.

3 Q. Okay.

4 "We found that increased filler pH
5 resulted in enhanced electrophysiological
6 subjective effects. We interpreted these data to
7 mean that higher pH is resulted in more
8 unprotonated nicotine, a more physiologically
9 effective form."

10 What does that mean?

11 A. Well, this is going back to that diagram
12 and saying first that higher pH causes more free
13 nicotine, and then they are saying in here that
14 they think that free nicotine is more
15 physiologically active. It's free nicotine that is
16 causing greater effects to the smoker. That is
17 what this document says.

18 Q. And is that the free base concept that
19 you told us about yesterday?

20 A. I didn't really talk about effects, but I
21 did talk about more free base. This document says
22 that more free base is likely to explain the
23 greater effect.

24 Q. And let's take this over and do a side
25 step here to cocaine. Not that tobacco is cocaine,

1 but in terms of what the -- nic -- the caf -- the
2 cod -- I'll start again -- in terms of what the
3 cocaine addict does to use the free base, what does
4 that do in terms of the physiologically effective
5 impact of the cocaine?

6 MR. COFER: Objection. Lack of
7 foundation. Argumentative.

8 MR. THOMAS: I can lay a foundation.
9 I'll withdraw the question.

10 THE COURT: Go ahead. Withdraw the
11 question.

12 MR. THOMAS: Thank you.

13 BY MR. THOMAS:

14 Q. Do you work with -- have you studied and
15 do you work with on a, maybe not a day-to-day
16 basis, but over the years at the poison center
17 people who have been addicted cocaine users, people
18 who have had cocaine overdoses, people who are free
19 base cocaine users?

20 A. I have that, and I have also published
21 papers specifically on cocaine and specifically on
22 issues of free base cocaine.

23 Q. All right.

24 Now, for that person who's free basing
25 cocaine, what effect does using the free base form

1 of the cocaine have on the physiological
2 effectiveness of that drug?

3 A. Well, when you smoke cocaine, people
4 smoke a free base because you get much more cocaine
5 in the smoke and you get much more absorption, much
6 more impact from the cocaine in the free base form
7 than in the salt form. So, free base form is
8 almost exclusively the form of cocaine that is
9 smoked.

10 Q. And this relates to the chemistry that
11 you talked to us about in connection with the
12 nicotine molecule, as well; correct?

13 A. Yes. It's not the pH part of it because,
14 actually, put in your pipe either cocaine salt or
15 cocaine free base.

16 Q. Right.

17 A. And if you put in the free base you get
18 much more effect from the free base than the salt.

19 Q. Oh, I didn't -- well, in terms of Exhibit
20 149, we have just been reading from, the effects of
21 cigarette smoke pH on nicotine delivery and the
22 physiologically effective form, this is a Philip
23 Morris document, is it not?

24 A. Yes.

25 Q. All right.

1 Let me check my notes. I think I'm --
2 Well, in terms of the way Philip Morris
3 has described the word impact, what is that in
4 terms of what the smoker feels?

5 A. Well, it's the sort of bite or the
6 strength of the cigarette smoke.

7 Q. And how do the feelings associated with
8 the bite play into the concept of addiction for
9 some smokers?

10 A. People, when they smoke a cigarette, they
11 get a certain sensation from smoking a cigarette.
12 They get effects of nicotine. And after awhile
13 they become very much linked to one another. And
14 many smokers find cigarettes that are stronger or
15 have more bite have are more satisfying, and,
16 therefore, they are potentially more addicting.

17 Just the same thing we talked about
18 yesterday relating to the taste of a cigarette or
19 the impact of the cigarette, the sensation of
20 smoking a cigarette is linked to nicotine effects.

21 Q. All right.

22 And I think this is my last question. In
23 regard to the question of addiction --

24 MR. COFER: Thank you.

25 BY MR. THOMAS:

1 Q. I'm going to represent to you that
2 Exhibit 110 is an internal memorandum within Philip
3 Morris, dated September 9, 1980, 17 years before
4 Jesse Williams died.

5 And, by agreement, what we have done is
6 to vary slightly change this document to delete and
7 then substitute a word. This is by agreement with
8 Philip Morris. Here's the quote.

9 "Counsel," which means lawyers, "remind
10 us," Philip Morris, "I'm told, that the entire
11 matter of addiction is the most potent weapon a
12 prosecuting attorney can have in a lung cancer
13 cigarette case.

14 "We," Philip Morris, "can't defend
15 continued smoking as," quote, 'free choice,'
16 unquote, if the person was addicted."

17 Now, based upon what you know and have
18 learned about Jesse Williams, was he addicted to
19 Marlboros?

20 A. Yes. And he was highly addicted to
21 Marlboros.

22 MR. THOMAS: No further questions.

23 MR. COFER: May I borrow your copy of
24 that exhibit? Thank you very much.

25 You may take your seat, Dr. Benowitz.

1 THE WITNESS: Thank you.

2 Can I have a glass of water, please?

3 THE CLERK: Yes.

4 THE COURT: Mr. Cofer, you have to move
5 that.

6 MR. COFER: I will, Your Honor. Thank
7 you. I'll move this out of the way.

8 THE COURT: You have still got a line of
9 sight issue.

10 MR. COFER: I'm sorry.

11

12 CROSS-EXAMINATION

13

14 BY MR. COFER:

15 Q. Good morning, Dr. Benowitz?

16 A. Good morning.

17 Q. My name is Walt Cofer. I introduced
18 myself to you yesterday, correct, sir?

19 A. Yes.

20 Q. And we have not met before then. We have
21 not met; right?

22 A. That's correct.

23 Q. Now, I hate to start out quibbling, but
24 I'm a lawyer and lawyers quibble. You are familiar
25 with that, aren't you?

1 A. I have noticed that.

2 Q. You have noticed that.

3 On Wednesday, I told this jury that 50
4 million people in this country, according to The
5 Centers for Disease Control, have quit smoking.
6 And that is correct, sir, isn't that?

7 A. It's probably pretty close. It's a
8 figure that is changing, and it depends if you're
9 talking living people or all people who have ever
10 smoked who have quit. But I don't contest that
11 number.

12 Q. Well, the reason I raise it, and again
13 it's a quibble, in your Direct Examination
14 yesterday you said 45 or 50 million; right?

15 A. Yes.

16 Q. But a month ago you testified in another
17 tobacco case. It was on -- it was in January,
18 January 15th, and it's true you were asked these
19 question and you gave this answer.

20 "QUESTION: "According to The Centers for
21 Disease Control, there are almost 50 million
22 ex-smokers in this country today?

23 "ANSWER: "Yes.

24 "QUESTION: "50 million people who used
25 to smoke and do not smoke?

1 "ANSWER: "Yes.
2 "QUESTION: "Those are people who have
3 quit for good?
4 "ANSWER: "Yes.
5 "QUESTION: "That is about half of
6 everybody who has ever smoked, isn't it?
7 "ANSWER: "Yes."
8 That was your sworn testimony, correct,
9 Doctor?
10 A. Yes.
11 Q. And, again, I don't want to quibble, but
12 I don't want the jury to think that I just made
13 those 5 million people up. Okay?
14 A. Well, I would say that 45 million is
15 almost 50 million, which is what I said before.
16 Q. Actually, a month ago you said 50, but I
17 just want to --
18 MR. THOMAS: Objection. Misstates the
19 evidence. Request that the quote be reread to
20 the witness.
21 MR. COFER: Okay. I will.
22 THE COURT: And, counsel, we don't need
23 to talk with each other regarding objections,
24 please.
25 MR. COFER: I apologize. And I will

1 reread it.
2 THE COURT: Proceed.
3 BY MR. COFER:
4 Q. Let me reread it slowly.
5 "QUESTION: "There are, according to The
6 Center for Disease Control, there are almost 50
7 million ex-smokers in this country today?
8 "ANSWER: "Yes.
9 "QUESTION: "50 million people who used
10 to smoke do not smoke?
11 "ANSWER: "Yes.
12 "QUESTION: "Those are people who have
13 quit for good?
14 "ANSWER: "Yes.
15 "QUESTION: "That's about half of
16 everybody who's ever smoked, isn't it?
17 "ANSWER: "Yes."
18 A. Well, let me say that I think any
19 reasonable person, once saying almost 50 million
20 people and then the other side comes back and says
21 50 million people, would not requalify every time.
22 I mean I think that is very nitpicking. And I do
23 not contest the 50 million. Whether it's 45 or 50,
24 whether it's almost 50, I have no problem with it.
25 Q. Thank you. And I won't spent a lot of

1 time on this, but the way they came up with 50
2 million is that in 1996 The Centers for Disease
3 Control said approximately 46 million people quit;
4 correct?

5 A. Yes.

6 Q. And the estimate is that a million and a
7 half people quit every year; right?

8 A. Yes.

9 Q. So, if you start in '96 with 46 million
10 some-odd, then you go to '97, you add a million and
11 a half, and you go to '98 and you add a million and
12 a half, you get into part of 2000, that is how you
13 get to the 50 million number; right?

14 A. Yeah, but how many of those people have
15 died?

16 Q. These are people -- well, okay. The
17 point is we agree on the 50 million; correct?

18 A. Yes.

19 Q. All right.

20 Now, let me tell you something else I
21 told the jury in opening statement about five
22 times, and I want to address these questions with
23 you, Doctor. I told this jury that this case is
24 about Jesse Williams, and so I want to ask you
25 specifically what you know about Jesse Williams.

1 Fair enough?
2 A. Yes.
3 Q. Now, you were not Mr. Williams' treating
4 physician, were you, sir?
5 A. No.
6 Q. And none of his doctors consulted with
7 you for any treatment or diagnosis; right?
8 A. Correct.
9 Q. In fact, you never met Mr. Williams, did
10 you?
11 A. No.
12 Q. You met Mrs. Williams for the first time
13 yesterday; right?
14 A. Yes.
15 Q. Now, you told us yesterday that you did
16 review some materials pertaining to Mr. Williams in
17 preparing to testify today; right?
18 A. Yes.
19 Q. Tell me -- tell the jury, actually,
20 specifically what you reviewed specific to
21 Mr. Williams?
22 A. I reviewed a transcript of an interview
23 with Mrs. Williams.
24 Q. Excuse me right there. Who conducted the
25 interview? And maybe the thing to do, with the

1 Court's permission, Doctor, I noticed you are adept
2 with a chart. Perhaps you can come down, and we
3 can create a chart so you can show the jury what
4 you reviewed. Would that be acceptable?

5 A. I could; although, there are not that
6 many things.

7 Q. Well, let's do it anyhow because I think
8 the visual may be instructive to the jury.

9 THE CLERK: I have got it.

10 MR. COFER: Thank you.

11 BY MR. COFER:

12 Q. And maybe you could just entitle this
13 What I reviewed about Jesse Williams.

14 Okay. The first thing, Doctor, you read
15 an interview of Mrs. Williams; right?

16 A. Yes.

17 Q. Who conducted that interview?

18 A. Charles Tauman and Dr. Michael Resnick.

19 Q. And Charles Tauman is one of the lawyers
20 representing Mrs. Williams in this lawsuit?

21 A. Yes.

22 Q. Doctor, who was the other person?

23 A. Doctor Michael Resnick.

24 Q. And he is one of the expert witnesses
25 named by the Plaintiffs in this lawsuit; right?

1 Did you know that?
2 A. I think so. I don't know him.
3 Q. You have no idea who he is?
4 A. Well, I know he's a witness in the case,
5 but I don't know exactly what he does.
6 Q. Okay. Please, what else did you review?
7 A. I reviewed the medical records. I
8 reviewed a deposition of Mrs. Williams.
9 Q. Let me stop you right there, if I may.
10 Did you review one deposition or two
11 depositions of Mrs. Williams?
12 A. I don't remember.
13 Q. Okay. Were you aware that Mrs. Williams
14 was, in fact, deposed twice in this case about the
15 facts underlying the case?
16 A. I don't believe so.
17 Q. Okay.
18 A. A deposition of his daughter Joann
19 Williams.
20 Q. Let me stop you there. Is that Joann
21 Williams-Branch?
22 A. I believe so.
23 Q. And did you review one deposition of hers
24 or two?
25 A. One.

1 Q. Okay. Are you aware that she was deposed
2 twice in this case with respect to the facts
3 underlying the claims?
4 A. No.
5 Q. Okay. Go ahead.
6 A. I reviewed a deposition of Jesse
7 Williams, Junior, the son.
8 Q. Okay.
9 A. And deposition of Glen Williams, who is
10 another son.
11 Q. Okay.
12 A. And then of Calvin -- Calver. I'm not
13 sure. I can't read my writing.
14 Q. How about Calvin Williams, would that be
15 right?
16 A. Calvin Williams.
17 Q. Do you know who Calvin Williams is?
18 A. His son.
19 Q. Okay.
20 A. And those are the ones that I looked at.
21 Q. Okay.
22 Now, what medical records did you review?
23 Did you review his entire packet of medical history
24 or were those selected by someone for you?
25 A. Well, I don't know if they were complete.

1 I reviewed what was supplied to me. A lot of it
2 described the treatment he had for his lung cancer.

3 Q. Okay.

4 A. There was some earlier regard as early as
5 the 1980s, but I do not know if they were complete.
6 I have no way of knowing that.

7 Q. Okay. Thank you.

8 Now, when you say you reviewed these
9 depositions, did you read them cover to cover?

10 A. Yes.

11 Q. Okay. Let's flip the chart, if we may,
12 and let's start on another chart.

13 And I notice you are testifying from some
14 notes. Can you tell me what those are?

15 A. These are just notes of some of the items
16 from these depositions.

17 MR. COFER: Okay.

18 May I have this marked, Your Honor?

19 Would you hand this to me, please.

20 THE COURT: She doesn't mark them.

21 MR. COFER: Oh.

22 THE COURT: Welcome to Oregon, Mr. Cofer.

23 MR. COFER: I knew someone marked them.

24 THE CLERK: Do you have a number?

25 MR. COFER: Let's do Defendant's Court

1 Exhibit 1.
2 THE COURT: No.
3 MR. COFER: Okay. Should the number be?
4 THE COURT: What is your next in
5 sequence, Mr. Dumas?
6 MR. DUMAS: 903, Your Honor.
7 THE COURT: Thank you.
8 MR. COFER: Thank you.
9 BY MR. COFER:
10 Q. I'll hand these back.
11 Now, if you would --
12 MR. THOMAS: Excuse me, counsel. In
13 regard to what happens to these notes, I request
14 that at the conclusion of his testimony the
15 Defendant make a copy and we'll put the copy in
16 but that we allow Dr. Benowitz to keep his file.
17 MR. COFER: Absolutely. Absolutely.
18 That is agreed. Fine.
19 BY MR. COFER:
20 Q. Let's do a second chart. Let's indicate
21 Jesse Williams Smoking History.
22 MR. DUMAS: Excuse me, Your Honor. While
23 the doctor is preparing that second chart, I made
24 a mistake, Your Honor. The next exhibit is 906.
25 THE COURT: We'll change the marking.

1 Thank you.

2 MR. DUMAS: Thank you. I apologize to
3 the Court.

4 THE WITNESS: Actually, for this, if I
5 may, there's another sheet of paper which I used
6 to tract from these notes the salient points.

7 MR. COFER: If you have that, that would
8 be great. Thank you. And may I see that,
9 please, and I'll have that marked, as well.
10 Thank you.

11 Would you Mark this, please?

12 THE COURT: That is 907.

13 MR. COFER: Correct, Your Honor.

14 THE COURT: This one previously is 906.

15 BY MR. COFER:

16 Q. Thank you.

17 Let me hand that back to you. And, okay,
18 when did Mr. Williams begin smoking?

19 A. In 1950.

20 Q. What brand did he start with?

21 A. I don't recall. He started smoking in
22 the military. And I just jotted down my notes that
23 he started smoking Marlboros in 1955, but I don't
24 recall. I have to look and see if I wrote down
25 what brand he started with.

1 Q. Okay. Let's -- why don't we start on the
2 chart then with 1950 to 1955. Is it fair for a
3 brand at this point just to put question mark?

4 A. Sure.

5 Q. Now, from 1950, especially, to 1955, how
6 many cigarettes did Mr. Williams smoke in an
7 average day?

8 A. Well, I'm not sure that people who
9 interviewed knew how much he smoked in the
10 military. I have that from 1955 on he was smoking.

11 Q. Can I stop you, Doctor? I apologize for
12 interrupting, but right now for clarity purposes I
13 want to focus on '50 to '55.

14 A. Well, let me say his wife said when she
15 met him in 1951 he was smoking one pack per day.

16 Q. Okay. So, you're relying on one pack a
17 day 1951; right?

18 A. Right.

19 Q. Okay. And what is your assumption from
20 '51 to '55? Do you have any information?

21 A. Well, I think he did increase his
22 smoking over the years. I don't have information
23 on that. I know that from '55 on he was smoking
24 between one and three packs per day.

25 Q. Okay.

1 A. So, I don't know specifically.

2 Q. For purposes of your opinion and your
3 testimony before this jury, are you assuming that
4 from 1950 to 1955 he averaged one pack a day?

5 A. Yes.

6 Q. Okay. That is your assumption? That is
7 part of the basis of your opinion;; is that
8 correct, sir?

9 A. I don't think it impacts my opinion one
10 way or the other, but that is my assumption.

11 Q. Okay. Well, let me ask you about that.
12 Your opinion doesn't in any way depend on how much
13 he smoked from '50 to '55?

14 A. His smoking history from 1955 -- everyone
15 starts smoking at some point in time. With respect
16 to the detailed history that I have someone who's
17 smoking for some 44 years or, let's see, some 42
18 years at a rate of one to three packs per day is
19 sufficient with respect to addiction.

20 I don't know. I don't need to know what
21 he smoked those first five years; although, it
22 wouldn't surprise me if he smoked a pack a day.

23 Q. Okay. But for purposes of your opinion,
24 your assumption is he smoked a pack day from '50 to
25 '55; is that fair?

1 A. Yes.

2 Q. Okay. Now, let's go from let's just say
3 1955 to 1965. Let's do it that way.

4 A. Okay.

5 Q. During that ten-year period how much did
6 he smoke a day?

7 A. Well, I don't have -- there was not
8 detailed information that I could find about that.

9 What I do have here is by the 1980s he
10 was smoking three packs a day.

11 And when the transition occurred between
12 one pack a day to two packs a day to three packs a
13 day, I don't have specific information on this.

14 Q. Okay let's do this then to make this
15 accurate. Let's write 1965 to 1975 and then 1975
16 to 1980.

17 Now, if I understand your testimony, the
18 information you have, Dr. Benowitz, is between 1955
19 and 1980 he was smoking somewhere between one and
20 three packs a day; is that correct?

21 A. Yes.

22 Q. You don't know how many but somewhere in
23 that range; right?

24 A. Yes.

25 Q. Then sometime in the 1980s his smoking

1 increased to up to three packs a day. Is that your
2 information?

3 A. Yes.

4 Q. Okay. Why don't you go ahead and write
5 then 1980 and just put forward. And did he
6 continue to smoke three packs a day from 1980 on?

7 A. At the time that he was diagnosed with
8 his lung cancer he was smoking two packs a day.

9 Q. And that was in October of 1996; is that
10 correct?

11 A. Correct.

12 Q. So, let's go ahead and put 1962 two packs
13 a day. And let's write from 1980 forward let's put
14 three packs.

15 A. Yes.

16 Q. Is that fair?

17 And, I guess, we ought to put here just
18 put a curlicue, and let's say one to three. Okay.

19 That is your best information based on
20 the available evidence and that is a smoking
21 history you are relying on in offering opinions to
22 this jury that you have offered, correct, Doctor?

23 A. Yes.

24 Q. Let's flip the chart, and let's make one
25 more chart.

1 Yesterday you told the jury that
2 Mr. Williams made approximately 20 attempts to quit
3 smoking. Do you recall that?

4 A. Yes.

5 Q. Let's write Attempts To Quit at the top.
6 When was the first time Mr. Williams
7 tried to quit smoke?

8 A. I don't have specific information about
9 that. I know there were some. I know there was a
10 medical record in September of 1989 when he was
11 given nicotine chewing gum to help him quit.

12 Q. Let me interrupt you, if I may. Write
13 down in September '89 chewing gum.

14 And would that be Nicorette?

15 A. Yes.

16 Q. Okay.

17 Now, let me ask you this. Do you have
18 any information about any specific attempts to quit
19 smoking between when he started in 1950 and this
20 entry in the medical records in September of 1989?

21 A. I don't -- let me qualify one thing.
22 This is a comment in the deposition of
23 Mrs. Williams that he started to try to quit in the
24 1970s. So, maybe that will give some information
25 about the first quit attempt, but I do not have

1 information about specific quit attempts.

2 Q. Now, started to try to quit. As a
3 professional who has lots of information on
4 quitting and attempts to quit, whether people can
5 quit, what does starting to attempt to quit mean?

6 A. Well, it can mean different things. It
7 can mean that a person says I would like to quit
8 smoking, and I'm going to do so. It could mean
9 making the first quit attempt. I don't know in
10 this case.

11 Q. And you would agree that one of the key,
12 absolutely, one of the key components in whether
13 someone quits successfully is motivation; right?

14 A. Yes.

15 Q. And it's also true that there's really no
16 scientific way to measure motivation; right?

17 A. Well, you know, it's mostly by
18 self-report, interviewing a person and trying to
19 find out.

20 Q. No little test you can perform? You ask
21 the person and you observe the person, basically;
22 right?

23 A. Right. There are no body function tests
24 you can measure? It's basically talking to the
25 person and trying to get a sense of motivation.

1 Q. But competent professionals, if they have
2 enough information, they can assess that, can't
3 they?

4 A. Well, it's by interview.

5 Q. Right.

6 And the fact is, other than
7 Mrs. Williams' comment that he started to try to
8 quit smoking in the '70s, you have no information
9 about quit attempts before September of 1989; is
10 that correct?

11 A. That's correct.

12 Q. When was the next time he tried to quit
13 smoking?

14 A. I don't have any note on my records of
15 any other specific times. Just that he did and
16 what happened, but I don't have times.

17 Q. Okay. You told the jury yesterday that
18 he quit 20 times, tried to quit 20 times; right?

19 A. Yes.

20 Q. What you are telling me today is that you
21 have in your notes one record that in September of
22 '89 he was prescribed nicotine chewing gum;
23 correct?

24 A. Yes.

25 Q. And you have a note that says

1 Mrs. Williams told you that sometime in the '70 he
2 began to try to quit; right?

3 A. Yes.

4 Q. Okay. Let me ask you this.

5 In the '70s why did he try to quit?

6 A. Well, he tried to quit because of some
7 issues relating to his church.

8 Q. Okay. I don't want to talk about that.

9 I don't want to talk about that at all.

10 Is that the only information you have as
11 to why he tried to quit?

12 A. Yes.

13 Q. Okay.

14 In your experience treating people all of
15 the time with, as you would call, a nicotine
16 addiction, what is the most common reason people
17 try to quit smoking?

18 A. The most common one is concern about the
19 health effects.

20 Q. Right. Concern about health because they
21 have been told by their doctors or others that
22 smoking can harm their health; right?

23 A. Yes.

24 Q. And that is why they want to quit
25 smoking; right?

1 A. Yes.

2 Q. Now, where did you get the information
3 that he tried to quit 20 times?

4 A. From the notes of Mrs. Williams from her
5 history.

6 Q. Okay. Okay. So, that is based on the
7 interview with Mr. Tauman, and I don't see him, one
8 of the lawyers who represents Mrs. Williams in this
9 lawsuit, and one of their expert witnesses compiled
10 in an interview they gave to you; right?

11 A. Right. But I have to say his daughter
12 didn't list 20 times, but his daughter said that he
13 tried numerous times to quit as well. Didn't say
14 20. But so other people in the family support the
15 fact that he tried many times.

16 Q. Fair enough. And did his daughter tell
17 you when was the first time he tried to quit?

18 A. No. She didn't talk to me, but in her
19 deposition that I saw.

20 Q. Okay. And you don't know what methods he
21 may have tried; right?

22 A. I know he tried different medications.
23 He tried patches. He tried gums. I don't know
24 more than that.

25 Q. How do you know that?

1 A. By the deposition history of his wife and
2 I think his daughter.

3 Q. Now, in order to get patches, until
4 recently, you had to have a medical prescription,
5 correct, Doctor?

6 A. Yes.

7 Q. You reviewed the medical records; right?

8 A. Yes.

9 Q. You didn't review all of the medical
10 records. You reviewed the records Plaintiff's
11 counsel provided you with; correct?

12 A. Yes.

13 Q. Did you find any reference to
14 prescription of nicotine patches?

15 A. I did not. I found reference to gum but
16 not patches.

17 Q. Okay. All right. Stay put, if you
18 would, for just a second, please.

19 An average, an average smoker starts 18,
20 19, 20, 21 years old. In your professional
21 experience, how many years before they are
22 addicted?

23 A. The average person starts actually at age
24 15.

25 Q. My question is a little different.

1 If you take the person, the average
2 person who starts at 18, 19 or 20, how long before
3 they are addicted?

4 A. The data with teenagers, I can give you
5 those. I don't know the specific data, but I can
6 give you data for teenagers.

7 Q. I can refresh your recollection.

8 Doctor, it's true, isn't it, that on
9 average a person who starts smoking at age 18 or 19
10 or 20 they are not addicted within the first six
11 months, but, on average, it takes two or three
12 years to become addicted?

13 MR. THOMAS: Excuse me. Objection.
14 Improper refreshing of recollection.

15 If he's going to refresh his
16 recollection, he should show him the document so
17 that the recollection can be refreshed. Reading
18 a document, without identifying it, is not
19 refreshing the recollection.

20 THE COURT: I don't know if the
21 questioner is refreshing or not. He may ask the
22 form of the question that he chooses. The form
23 just asked is not objectionable.

24 The objection is overruled.

25 Go ahead and answer, if you can.

1 THE WITNESS: Well, as I was saying, the
2 best natural history data we have is based on
3 people starting in their teens. And it takes, on
4 average, three years, two to three years from
5 smoking their first cigarette to becoming
6 addicted to cigarette smoking.

7 BY MR. COFER:

8 Q. Okay.

9 And, in response to counsel's objection,
10 you testified in a case in Florida on October 27th,
11 1998. You were asked this question and you gave
12 these answers.

13 MR. THOMAS: Excuse me.

14 Objection. May the witness, if he is
15 going to be refreshed --

16 MR. COFER: I'll be happy to show it to
17 him.

18 THE COURT: Counsel.

19 MR. COFER: I apologize. I'm sorry.
20 Excuse me.

21 MR. THOMAS: If the witness is going to
22 be refreshed or impeached have an opportunity to
23 look at the deposition so that he can determine
24 the context of the question and the answer before
25 he's asked to answer, please.

1 THE COURT: Yes.

2 The witness may see the question and
3 answer in print before he's asked to answer.

4 But the questioner may read it first and
5 then show it to him.

6 BY MR. COFER:

7 Q. Okay.

8 So, let me read it, and I'll show it to
9 you, and I'll ask you if I have read it correctly.

10 And I'll start again. October 27th, 1998
11 in Florida, were you were asked these questions and
12 you gave this answer.

13 "QUESTION: "And as I recall your
14 testimony yesterday, if a person starts smoking at
15 age 18 or 19 or 20 they are not addicted, as you
16 use the term, in the first six months that they are
17 smoking cigarettes; right?

18 "ANSWER: "Some are. But on average it
19 takes two or three years to become addicted.

20 "QUESTION: "So, during that two to three
21 years, people, if they want to do it, before they
22 get do that point, not being addicted, could quit;
23 right? Yes? Or could quit; right?

24 "ANSWER: "Yes."

25 Let me show that to you, Lines 20 through

1 25, and ask you if I read that correctly?
2 A. Yes.
3 Q. Okay.
4 And is that your opinion? Is that what
5 the data shows?
6 A. Yes.
7 Q. Did you have any information that
8 Mr. Williams was other than the average person?
9 A. No.
10 Q. Okay.
11 Let me show you a time line I used in
12 opening statement. Mr. Williams began smoking in
13 1950; right?
14 A. Yes.
15 Q. Smoked his first Marlboro cigarette in
16 1955; correct?
17 A. Yes.
18 Q. We don't know what he smoked between '50
19 and '55, do we?
20 A. I don't.
21 Q. The average person is addicted within the
22 first two and a half to three years; right?
23 A. Yes.
24 Q. You may return to your seat.
25 THE COURT: Mr. Cofer, at some point

1 we'll need to take the morning break, and I don't
2 want to interrupt your train of thought on a
3 topic, but find a place eventually.

4 MR. COFER: Perfect time.

5 THE COURT: Perfect time. All right.

6 Jurors, notes on the chairs, please.

7 Don't discuss the case. Watch your step coming
8 on out. 15 minutes or so.

9 * * *

10 (Whereupon, the jury exited the courtroom, and
11 the proceedings continued, as follows:)

12 * * *

13 THE COURT: Anything for the record for
14 the Plaintiffs?

15 MR. THOMAS: And I don't mean to quibble,
16 but the predicate to the question that I objected
17 to was, "Let me see if I can refresh your
18 recollection."

19 THE COURT: Right. But then the form of
20 the question was not technically phrased in that
21 way. So, I'm not able to connect one question to
22 the next necessarily for the purpose of the
23 objection. I have to look at the question asked.

24 MR. COFER: May I ask a question, Your
25 Honor?

1 THE COURT: Yes.

2 MR. COFER: As a non-Oregonian, is the
3 witness to talk with his counsel while on cross?

4 THE COURT: Not with a pending question,
5 but there are no pending questions.

6 MR. COFER: All right. Thank you.

7 THE COURT: Anything else for the record?

8 MR. THOMAS: May the witness stand at
9 ease?

10 THE COURT: I'm about to do that, if you
11 will just let me do my job.

12 Okay.

13 Yes. Sir, you may step down.

14 Okay. 15 minutes. We are off the
15 record.

16 * * *

17 (Whereupon, after a recess, the proceedings
18 continued, as follows:)

19 * * *

20 THE COURT: If you are going to talk to
21 the jury about them by reference you might as
22 well wait and do it then.

23 MR. COFER: I don't know whether I will,
24 but I will just do it out of caution. Thank you.

25 THE COURT: Are we ready for the jury?

1 MR. THOMAS: Plaintiff is ready.

2 THE COURT: Bring in the jury, please.

3 * * *

4 (Whereupon, the following proceedings took
5 place in open court, in the presence of the
6 jury, as follows:)

7 * * *

8 THE COURT: All right.

9 Jurors, welcome back.

10 Mr. Cofer.

11 MR. COFER: Thank you, Your Honor.

12 At the break, I asked Mr. Rice and he
13 marked the drawings or the exhibits that Doctor
14 Benowitz prepared. And let me go ahead and put
15 that in the record.

16 The first drawing that was prepared, the
17 first summary chart by Dr. Benowitz, entitled
18 Review of Jesse Williams, is Defendant's 908.

19 The summary that Dr. Benowitz prepared,
20 entitled Jesse Williams Smoking History is
21 Defendant's 909.

22 The summary Dr. Benowitz prepared
23 captioned Attempts to Quit is Defendant's 910.

24 BY MR. COFER:

25 Q. Dr. Benowitz, where I think we were when

1 we took the break was you told us that it was your
2 opinion that on average a person who begins smoking
3 at 18, 19 or 20 becomes addicted within year and a
4 half to two years; is that correct, Doctor?

5 A. I said two to three years.

6 Q. Two to three years. Thank you for the
7 correction.

8 And I think you also told the jury that
9 you had no reason to believe Mr. Williams was
10 anything other than an average person; correct?

11 A. Yes.

12 Q. So, let me just ask you the question.

13 Do you have an opinion, to a reasonable
14 degree of medical certainty, whether Mr. Williams
15 was addicted to nicotine cigarettes by 1955?

16 A. Yes.

17 Q. What is that opinion?

18 A. He was.

19 Q. So, your opinion is that Mr. Williams was
20 already addicted before he ever smoked a Marlboro
21 cigarette; is that correct, Doctor?

22 A. Yes.

23 Q. This time line shows that he began in
24 1955; right?

25 A. Yes.

1 Q. Now, as a doctor you advise your patients
2 to quit smoking, don't you?

3 A. Yes.

4 Q. And one reason you do -- well, let me
5 back up.

6 Basically, these days, all doctors advise
7 their patients to quit smoking; correct?

8 A. They should.

9 Q. That has been true for some time?

10 A. Yes.

11 Q. And the reason, one reason that doctors
12 advise their patients to quit is because they know
13 they can quite; right?

14 A. Well, that is a funny way to look at it.
15 They advise patients to quit because it's a
16 serious health risk. I think that they expect that
17 some of their patients will be able to quit, I'm
18 not sure that's why they tell them.

19 Q. Doctor, last month on January 15th, 1999
20 you were asked this question under oath and you
21 gave this answer.

22 "QUESTION: "Now, one of the reasons
23 doctors advise their patients to quit smoking is
24 because people can quit smoking, isn't it?

25 "ANSWER: "Yes."

1 MR. THOMAS: Have we followed the
2 procedure we established?

3 MR. COFER: I'll be happy to show it to
4 the doctor to be sure I read it correctly, and
5 then I'll ask a follow-up.

6 BY MR. COFER:

7 Q. Lines 18 through 21.

8 Did I read that correctly?

9 A. Yes. But I think the overall sentiment
10 is right, but the logic of it is a little bit
11 wrong. And I think I missed the logic the last
12 time.

13 It's true that you do hope that some
14 patients will quit, and you expect that some will
15 quit, but you don't tell them to do something just
16 because they can do it.

17 You tell them to do it because there's an
18 one-in-two or one-in-three chance that they are
19 going to die prematurely from smoking cigarettes.
20 That is why you tell them. You hope that they will
21 be able to comply.

22 But, you know, if I tell somebody to stop
23 drinking coffee because I know they can, would I do
24 that, that makes no sense to do that.

25 The why is because it's a serious health

1 hazard.

2 Q. Let me make sure I understand. One
3 reason you tell patients to quit smoking is you
4 know that if they quit that reduces their chances
5 in getting a disease that may be caused by smoking;
6 correct?

7 A. Yes.

8 Q. You also know that people can quit
9 smoking; correct?

10 A. Yes.

11 Q. You don't tell your patients they can't
12 quit, do you?

13 A. No.

14 Q. Yesterday Mr. Thomas asked you about a
15 study that you participated in that looked at the
16 differences between black smokers and white
17 smokers. Do you recall that?

18 A. Yes.

19 Q. That was published in the Journal of the
20 American Medical Association right?

21 A. Yes.

22 Q. That was entitled Nicotine Metabolism and
23 Intake in Black and White Smokers; right?

24 A. Yes.

25 MR. THOMAS: Thank you. First I would

1 like to see it. Thank you.
2 BY MR. COFER:
3 Q. Now, as I recall your testimony, what you
4 told us was basically you discovered two things.
5 One was that black smokers may clear nicotine more
6 slowly than white smokers from their system; is
7 that right?
8 A. Yes.
9 Q. And the other is that black smokers may
10 inhale more smoke than white smokers; is that
11 right?
12 A. Yes.
13 Q. And you told us you didn't know why that
14 was true; correct?
15 A. Yes.
16 Q. Now, in the paper you and the other
17 authors hypothesized why that may be true, correct,
18 Doctor?
19 A. Yes.
20 Q. And you say -- can you see the monitor?
21 A. I can't read it.
22 Q. Okay.
23 A. If you read it to me, it will be fine.
24 Q. All right. Well, also I'll hand you a
25 copy to follow along.

1 I'm going to start right here. Okay.

2 JUROR BEST: Excuse me. We are partially
3 blocked here.

4 MR. COFER: I'm sorry. Oh, I apologize.
5 Thank you.

6 THE CLERK: Let me get that.

7 MR. COFER: Tell me whether that focuses
8 it more?

9 BY MR. COFER:

10 Q. Tell me if I read this correctly, Doctor.

11 "Racial differences in drug metabolizing
12 activity could also be attributable to five
13 environmental factors. One possible environmental
14 explanation is that smoking mentholated cigarettes
15 influences cotinine metabolism."

16 And cotinine is what you measure to see
17 whether black smokers excrete nicotine more slowly
18 than white smokers; correct?

19 A. Not quite accurate, but the spirit is
20 accurate. We do measure cotinine as a marker.

21 Q. In the blood, in this article; right?

22 A. Yes.

23 Q. "Nearly all of the blacks and a few of
24 the whites in our study smoked mentholated
25 cigarettes, which reflects national racial patterns

1 of smoking behavior. No data are available on the
2 effects of menthol on drug metabolism. So, further
3 research is needed to address this possibility. "

4 Going on, "The reasons why blacks take in
5 more nicotine and more cigarette smoke per
6 cigarette are unclear. The most obvious
7 possibility is the menthol, via its fueling action,
8 facilitates deep inhalation. However, studies
9 measuring puffing behavior and puff volumes after
10 persons have smoked mentholated versus
11 non-mentholated cigarettes have not supported this
12 explanation."

13 Did I read that correctly, Doctor?

14 A. Yes.

15 Q. And basically, as I read it, what it says
16 is we don't know why these observations we saw are
17 true. One explanation may be and perhaps the most
18 obvious explanation there is something about
19 menthol that allows a smoker to take in more
20 nicotine?

21 A. Right. Yes.

22 Q. And also, according to demographics, 80
23 percent of African Americans smoke mentholated
24 cigarettes; right?

25 A. That's correct.

1 Q. May I borrow that?
2 MR. THOMAS: The pack? All right.
3 MR. COFER: And may I borrow one
4 cigarette out of it?
5 MR. THOMAS: You can have one.
6 MR. COFER: Thank you.
7 That is what I really wanted.
8 MR. THOMAS: It's sort of ironic though,
9 isn't it?
10 BY MR. COFER:
11 Q. Mr. Williams did not smoke mentholated
12 cigarettes, did he?
13 A. No.
14 Q. He Marlboro 100s; correct?
15 A. Correct.
16 Q. Now, while I have this cigarette, kind of
17 out of sequence, but let's go with it, yesterday
18 you talked about ventilation holes. Do you
19 remember that?
20 A. Yes.
21 Q. You talked about dilution; right?
22 A. Yes.
23 Q. And what you explained to the jury was
24 that many modern cigarettes have ventilation holes
25 and that permits the air to come into the filter

1 and dilutes the tar and nicotine coming from the
2 smoke, reduces the yield of the smoke that comes
3 out of the end of the cigarette; right?

4 A. Yes.

5 Q. Now, you said a problem with that was
6 smokers don't know where the ventilation holes are;
7 right?

8 A. Yes.

9 Q. And so while that may happen in the
10 machine -- I think Mr. Thomas called it the smoke
11 sucking machine. Let's refer to it as the FTC
12 method. Okay?

13 A. Yes.

14 Q. While that may happen in the machine,
15 when smokers actually smoke these cigarettes, if
16 they don't know where these ventilation holes are
17 they can become covered up or occluded with their
18 mouth or fingers; right?

19 A. Yes.

20 Q. Let me hand you this Marlboro 100, which
21 is the type of cigarette Mr. Williams smoked, and
22 if you would mark on that where the ventilation
23 holes are?

24 A. Well, I have actually looked at these
25 before. I don't think that these -- this cigarette

1 has ventilation holes in it. The Marlboro Light
2 does. But I don't see them unless they are so
3 microscopic I can't see them either.

4 Q. The fact is, Dr. Benowitz, that the
5 cigarettes that Mr. Williams smoked don't have
6 ventilation technology; right?

7 A. I can't say if it has. I can't see. I
8 don't think so.

9 Q. Don't have vent holes so they can't
10 become occluded when someone smokes them; right?

11 A. Correct.

12 Q. And while we are on that, do you know who
13 it was at Philip Morris who determined where those
14 ventilation holes should be placed?

15 A. I do not.

16 Q. Do you understand what the tradeoffs are
17 in trying to locate these holes?

18 A. Yes. The further down the rod it is, the
19 more ventilation you get of the finer smoke.

20 Q. Well, as I understand it, the closer you
21 get away from the smoker's mouths you can effect
22 what's called the pressure drop or the draw. Are
23 you aware of that?

24 A. Yes.

25 Q. And by that it means it becomes very hard

1 to smoke. It's hard to suck the smoke through;
2 right?

3 A. Right.

4 Q. That effects the subjective
5 characteristics of the smoke to the smoker; right?

6 A. Yes.

7 Q. If you have to, some have described it
8 like smoking a mattress. But now if you get them
9 too close, you could run into the problems you
10 described about the smoker compensating by covering
11 up the holes with his or her lips or with the
12 fingers; right?

13 A. Yes.

14 Q. Okay. Have you ever heard of Bill
15 Farone?

16 A. Yes.

17 Q. Bill Farone, in fact, is an expert
18 witness for Plaintiffs in this case; right?

19 A. Yes.

20 Q. Were you aware that Bill Farone is the
21 person at Philip Morris who is responsible for
22 where the ventilation holes are placed?

23 A. I did not know that.

24 Q. He'll be here next week.

25 With respect to this study regarding the

1 differences in metabolism intake in black and white
2 smokers, we have established that Mr. Williams
3 didn't smoke menthol cigarettes; right?
4 A. Yes.
5 Q. But that is just one theory of why these
6 observations may be true; right?
7 A. Yes.
8 Q. But it is true, isn't it, Doctor, that
9 African Americans do quit smoking?
10 A. Yes.
11 Q. Now, in your testimony yesterday you also
12 referred to different people having different
13 genetic make up. Do you remember that?
14 A. Yes.
15 Q. You suggested there was some research
16 that may indicate that some people genetically have
17 more trouble quitting than others; correct?
18 A. Yes.
19 Q. Are you aware, Doctor, that several
20 members of Mr. Williams' own family have quit
21 smoking?
22 A. Yes.
23 Q. Blood relatives would have similar
24 genetic make ups; right?
25 A. Well, similar but also very different.

1 The way the genetics are worked out is actually
2 looking at identical twins who have exactly the
3 same genetic makeup, compared to fraternal twins
4 who have similar but quite different makeup.

5 Q. Did you -- I'm sorry. I didn't mean to
6 cut you off.

7 A. So, you have to have a very strong
8 genetic influence to have it work on siblings that
9 are not identical twins.

10 If they are identical twins, you would
11 expect behaviors to be very similar. So, it's hard
12 to conclude because his children could quit that he
13 could quit because the same genes are working in
14 both.

15 Q. And that you. I appreciate that
16 clarification. But in terms of whether
17 Mr. Williams was somehow genetically susceptible,
18 it would be helpful to know whether his father
19 quit, whether his children quit, whether his
20 brother quit; correct?

21 A. In theory that is true, but we don't know
22 enough about the genetic markers yet to know which
23 ones to look at. Like I said, most of the
24 information about genetic influences on quitting
25 have come from twin studies.

1 Q. So, in 1999, today, in this courtroom, we
2 don't know enough about the genetic markers to make
3 those sorts of conclusions; is that right?

4 A. Not for people who are not twins. I have
5 to say there's a lot of research ongoing. This is
6 a very current research area. People are trying to
7 look for markers. But there are none that are
8 highly predictive at this stage.

9 Q. So, right now, February -- what is today,
10 20 -- what is today the 25th? The 26th. February
11 26th, 1999, there is lots of ongoing research into
12 genetic susceptibility and why some people can quit
13 smoking easily and somebody can't. Is that your
14 testimony, Doctor?

15 A. Well, let me make sure you understand it
16 correctly. The phenomenon is well characterized
17 based on twin studies. In fact, there is a genetic
18 influence. The ongoing research is what genes
19 explain that?

20 Q. Because we don't know the answer to that;
21 right?

22 A. We don't fully know the answer. We have
23 some hints, but we don't know the full answer.

24 Q. And, hopefully, once we know the answer
25 to that question we can do something about it;

1 right?
2 A. Hopefully.
3 Q. You have testified as an expert witness
4 against tobacco companies other times; correct?
5 A. Yes.
6 Q. By my count, I think I have 15
7 depositions or trial testimony. Sound about right?
8 A. It could be. I don't know.
9 Q. And you have agreed to be listed as an
10 expert in other cases, as well, correct, sir?
11 A. Yes.
12 Q. And, of course, you charge for your time?
13 A. Yes.
14 Q. Your current rate is \$400 an hour?
15 A. Yes.
16 Q. How much money did you make last year
17 consulting with Plaintiff's lawyers and testifying
18 against tobacco companies?
19 A. Probably \$40,000 or \$50,000. I'm not
20 sure.
21 Q. How much have you made on this case?
22 A. I haven't billed anything yet.
23 Q. Okay. How many hours are you going to
24 bill for your time yesterday?
25 A. Oh, ten or 12 hours, considering the --

1 well, actually about ten, ten hours, considering
2 the time I met with the attorneys before and worked
3 on the case afterwards.

4 Q. And that is at \$400 per hour?

5 A. Yes.

6 I have to say that these billings go to
7 the University of California San Francisco, and
8 some of it actually goes to my department to
9 support my department and some comes to me.

10 Q. Okay. FTC method we heard about. The
11 FTC method. Yesterday. And that is what
12 Mr. Thomas calls the machine sucking smoke. But
13 let's talk a little bit about what the FTC method
14 is. All right?

15 A. Yes.

16 Q. In the '60s, I guess, '66, '67, The
17 Federal Trade Commission wanted to come up with a
18 uniform way to smoke cigarettes for comparison
19 basis; right?

20 A. Yes.

21 Q. What they decided on was they would take
22 a certain machine; correct?

23 A. Yes.

24 Q. And they would do 35 milliliter puffs.

25 A. Yes.

1 Q. Correct. Every two seconds. No. What
2 was it, a two-second puff; right?

3 A. Puff duration two seconds.

4 Q. And then they would take a puff every
5 minute; correct?

6 A. Yes.

7 Q. That was a protocol that the FTC decided
8 on; right?

9 A. Yes.

10 Q. After public comment from tobacco
11 companies and others as well; right?

12 A. Yes. Yes.

13 Q. Now, as I understood your testimony
14 yesterday, one component of it was that that FTC
15 method didn't tell us what happens to actual
16 smokers when they smoke; right?

17 A. Yes.

18 Q. Now, that is not a surprise, is it?

19 A. No.

20 Q. Everyone has always known that; right?

21 A. Yes and no. It was always known that an
22 individual's smoke exposure would not be predicted
23 by the test.

24 What was not known was these tests were
25 not roughly predictive of what populations of

1 smokers would take in, which we now know. And that
2 occurs because of compensation behavior. And if
3 you want the test to work, you need to advise
4 people how not to over compensate it.

5 Q. Okay.

6 A. And that has never been explained to
7 smokers.

8 Q. And we'll talk about compensation with
9 respect to Mr. Williams in a moment. But first let
10 me show you Defendant's Exhibit 646. And I'll tell
11 you this is a news release from The Federal Trade
12 Commission. And I'll show you.

13 MR. THOMAS: Do you have extra copies of
14 that?

15 MR. COFER: I do. I think I may have to
16 someone to get one for you.

17 MR. THOMAS: Is this in evidence?

18 MR. COFER: It is. It is Defendant's
19 646.

20 MR. THOMAS: All right.

21 BY MR. COFER:

22 Q. This is a News Release from The Federal
23 Trade Commission, dated Tuesday, August 1st, 1967.
24 And I'll read this to you, and then I'll show it to
25 you.

1 It says, "No test can precisely duplicate
2 conditions of actual human smoking, and within
3 fairly wide limits no one method is said to be
4 right or wrong. The Commission considers it most
5 important that the test results be based on a
6 reasonable standardized method and that they be
7 capable of being presented to the public in a
8 manner that is readably understandable."

9 Page 2, "In determining the testing
10 method, the Commission has not attempted to gauge
11 the test to the amount of smoke or tar or nicotine
12 which the average smoker will draw from any
13 particular cigarette. No two human smokers smoke
14 in the same way. No individual smoker always
15 smokes in the same fashion. The speed at which one
16 smokes varies both among smokers, and usually also
17 varies within the same individual under different
18 circumstances even within the same day. Even
19 within the same type of cigarette, the individual
20 smokers take a different number of puffs per
21 cigarette depending upon the circumstances."

22 And that is consistent, Doctor, with your
23 knowledge of what the FTC said about the smoking
24 test; correct?

25 A. Yeah. I'm just curious. What year is

1 this document?

2 Q. This is August the 1st, 1967. This was a
3 press release from The Federal Trade Commission,
4 Office of information, Washington, D.C.

5 A. Right. If you were to look at the
6 Federal Trade Commission documents currently, they
7 would explain a lot of the issues and concerns
8 about why the method has really failed.

9 Q. Okay.

10 A. And the issue is Philip Morris said that
11 you lowered nicotine deliveries by 70 percent.

12 Q. Okay.

13 A. But, in fact, that is not correct, and
14 it's because of the compensation. And your
15 documents know that. So, even though that test was
16 developed in '67 and thought to be valid, it's well
17 known that it's not valid now even for giving rough
18 predictions.

19 Q. Really?

20 A. So, saying 70 percent reduction has
21 occurred is clearly not true.

22 Q. Okay.

23 A. And it's known by Philip Morris that that
24 is not true.

25 Q. Okay. Well, I'm glad you mentioned that

1 because I want to ask you about that.

2 But, before I get to that, let's talk
3 about what Philip Morris told the FTC before that
4 test, before that press release in '67.

5 And first let me say what I think you
6 said, two things, to the jury.

7 One is that may have been what the FTC
8 thought in '67 but now their view has changed.
9 They have learned more information. The FTC no
10 longer thinks that is true; right?

11 A. Well, the problems with that test are now
12 better recognized, that's correct.

13 Q. As time has gone on, information has
14 improved, technology has improved, knowledge has
15 improved, science has improved, correct, sir?

16 A. Yes.

17 Q. And it's a pretty common phenomenon, is
18 it not?

19 A. Yes.

20 Q. Hopefully, we learn as we go.

21 All right. The tobacco companies had an
22 opportunity to comment on that test, and they
23 submitted -- this is Defendant's Exhibit 663 --
24 comments about what that test would and would not
25 show. Let me show this to you. Supplementary

1 observations following November 30th, 1966 hearing,
2 Federal Trade Commission, submitted by tobacco
3 companies including my client Philip Morris
4 Incorporated, correct, Doctor?

5 A. Yes.

6 Q. Okay. This is from the tobacco companies
7 to the FTC. They were trying to decide what to do
8 about that test method. Okay.

9 In fact, they say, "This memorandum
10 endeavors in simple form to expose and clarify the
11 complex technological procedures involved in
12 testing the amount of particulate matter."

13 That is basically tar; right?

14 A. Yes.

15 Q. "And nicotine in cigarette smoke."

16 "Whether you call it tar or particulate
17 matter, the so-called Ogg Method, employing the
18 Cambridge filter."

19 Which is what the FTC uses; correct?

20 A. Yes.

21 Q. The Cambridge filter is a filter the
22 smoke comes through it and tar and nicotine is
23 collected on it and then analyzed; right?

24 A. Yes.

25 Q. "Seeks to determine the non-vapor

1 material in cigarette smoke as generated in the
2 automatic standardized smoking of a cigarette by a
3 machine, not by a human being, according to
4 necessary prescribed standard technical
5 directions."

6 I read that correctly, Doctor?

7 A. Yes.

8 Q. Page 2, Philip Morris submission to the
9 FTC. "The Ogg Method does not measure the volume
10 of smoke or the particulate matter or nicotine in
11 the volume of smoke -- that any human being will
12 draw from smoking any particular cigarette. Each
13 smoking characteristic is leveled or averaged out
14 by the standard method."

15 "No two human smokers smoke in the same
16 way. No individual smoker always smokes in the
17 same fashion. The speed at which one smokes
18 varies. "

19 "Even with the same type of cigarette,
20 individual smokers take a different number of puffs
21 per cigarette, depending on the circumstances."

22 And finally, Page 3, highlighted, "The
23 Ogg Method -- " that is the FTC method -- "does not
24 and cannot measure these many variations in human
25 smoking habits."

1 Did I read that correctly?

2 A. Yes.

3 Q. That was submitted by Philip Morris and
4 other companies to the FTC before the FTC decided
5 on their method, correct, Doctor?

6 A. Yes.

7 Q. Now, part 2. I told the jury in opening
8 statement that the tar in nicotine levels of
9 cigarettes on average have dropped 70 percent from
10 the '50s until today. I told them that.

11 You are telling them that is not true;
12 right?

13 A. Well, I guess it depends on what you
14 meant by deliveries. If you meant by machine
15 testing deliveries, I don't argue with that.

16 Q. Okay.

17 A. If you mean by smoker exposure, I do
18 argue with that.

19 Q. Okay. Well, here's what I mean. Let's
20 see whether we have disagreement. That over the
21 years the public health community, the scientific
22 community, and the government have told and
23 advocated that the cigarette companies reduce tar
24 and nicotine levels in the smoke, correct, Doctor?

25 A. That's correct.

1 Q. And in order to measure whether that, in
2 fact, has occurred, the FTC has standardized
3 methods; correct?

4 A. Yes.

5 Q. That is the method we just described;
6 right?

7 A. Yes.

8 Q. Now, I think what you told the jury was
9 you don't know, if you took a 1950 cigarette and a
10 1990 cigarette and you tore it open and you
11 measured the amount of tar and nicotine in the
12 tobacco itself, before it's smoked, you don't know
13 whether that would be a 70-percent reduction;
14 right?

15 A. Well, you can't measure tar. You can
16 measure nicotine. You can't measure tar until it's
17 burned.

18 Q. So, you don't know whether nicotine would
19 be a 70-percent reduction; right?

20 A. That's correct.

21 Q. But if you look to the yield, which is
22 the stuff, the smoke, coming out of the back end of
23 the cigarette, you don't quarrel with me that the
24 yield, as measured by the Federal Trade
25 Commission's test, on average, is 70 percent lower

1 from the 1950s and the 1990s; right?
2 A. That's correct.
3 Q. Where you quibble with me -- I'm sorry.
4 That is an inappropriate characterization. Where
5 we disagree is what the affect is on the individual
6 smoker; right?
7 A. Yes.
8 Q. And you say the effect varies from
9 individual to individual; correct?
10 A. Yes.
11 Q. Depending on things like compensation;
12 right?
13 A. Yes.
14 Q. Now, compensation is kind of a broad
15 term; correct?
16 A. I'm not sure how to answer that question.
17 Q. Well, perhaps it's a bad question. So,
18 let me ask you a different one.
19 The idea behind compensation, as I
20 understand it, as I'm using it, is if you have a
21 smoker, a dedicated smoker, let's say, Jesse
22 Williams, and he smokes Marlboro 100s, he's
23 accustomed to a certain amount of tar and nicotine;
24 right?
25 A. Yes.

1 Q. So, if you give him a light cigarette,
2 one that has lower tar and nicotine, the thinking
3 goes that, at least in the short term, we can talk
4 about that, but at least in the short term
5 Mr. Williams will adjust the way he smokes that
6 cigarette to get the amount of tar and nicotine and
7 there's a debate whether it's tar and nicotine that
8 he's accustomed to; right?
9 A. Yes.
10 Q. A number of ways to do that, aren't
11 there?
12 A. Yes.
13 Q. To compensate.
14 One way is you just smoke more
15 cigarettes; right?
16 A. Right.
17 Q. You are smoking for a dose of nicotine or
18 a dose of tar. You just smoke the amount of
19 cigarettes you need; right?
20 A. Yes.
21 Q. There are more subtle ways, too, aren't
22 there?
23 A. Yes.
24 Q. If you had a ventilation holes, you can
25 learn to consciously or subconsciously occlude or

1 block them; right?

2 A. Yes.

3 Q. But we don't have ventilation holes on
4 Mr. Williams' cigarettes, do we?

5 A. Not that I can see.

6 Q. The other thing that you can do is you
7 can just adjust how hard you suck and how often you
8 puff; right?

9 A. Yes.

10 Q. Now, typically, when you see this
11 compensation you see it in a person who starts with
12 a higher delivery cigarette and is trying to trade
13 it down to a lower delivery cigarette; right?

14 A. Well, there are actually two different
15 phenomenon. One phenomenon is the switching. The
16 other phenomenon, which actually I think is more
17 important for this case, is the self selected
18 cigarette.

19 Q. Okay. Now, let's start with the first.
20 with respect to switching, the thinking is that if
21 you switch you are going to smoke that new
22 cigarette in a way to get the same amount of tar
23 and nicotine you got from the old cigarette?

24 A. Yes.

25 Q. And, of course, in this case Mr. Williams

1 didn't switch; right?
2 A. Correct.
3 Q. He smoked this cigarette?
4 A. Yes.
5 Q. Compensation was not a secret phenomenon,
6 was it?
7 A. No. It's been known since the early
8 1970s.
9 Q. Outside of the tobacco companies, as
10 well; correct?
11 A. Yes.
12 Q. Okay.
13 The Dunn document. Would you have yours
14 handy?
15 MR. THOMAS: Do you want to borrow it?
16 MR. COFER: Yeah, if you don't mind.
17 MR. THOMAS: Do you want to give me an
18 exhibit number?
19 MR. COFER: I promise to give it back to
20 you.
21 MR. THOMAS: You borrow my cigarettes.
22 You're borrowing my documents.
23 Okay. What number?
24 MR. COFER: The one about the St. Martin
25 conference, I'm sure.

1 MR. DUMAS: 86.
2 MR. COFER: 86.
3 MR. THOMAS: Thank you.
4 MR. COFER: Thank you, Mr. Thomas.
5 BY MR. COFER:
6 Q. This is a document which Mr. Thomas
7 showed you yesterday and he described to the jury,
8 entitled Motives and Incentives in Cigarette Smoke.
9 Do you remember this, Doctor?
10 A. I do.
11 Q. It was prepared by Dr. William Dunn or
12 William Dunn, Junior, Philip Morris; right?
13 A. Yes.
14 Q. Bill Dunn, that nicotine kid. Do you
15 remember Mr. Thomas referred to as the nicotine
16 kid?
17 A. Yes.
18 Q. And this document starts out:
19 "There is a lovely little island lying
20 about 150 miles east of the Virgin Island."
21 It goes on and it described some
22 activities that occurred there; correct?
23 A. Yes.
24 Q. What it described is the meeting among
25 scientists to discuss why people smoke; right?

1 A. Yes.
2 Q. That meeting was not a secret Philip
3 Morris meeting, was it?
4 A. No.
5 Q. It wasn't just a secret tobacco industry
6 meeting, was it?
7 A. No.
8 Q. There were outside scientists there,
9 weren't there?
10 A. Yes.
11 Q. Respected outside scientists; correct?
12 A. Yes.
13 Q. In fact, you are familiar with a
14 scientist by the name of Dr. Jarvik?
15 A. Yes. He's a good friend of mine.
16 Q. Well-regarded scientist?
17 A. Yes.
18 Q. Independent of the tobacco companies?
19 A. Yes.
20 Q. How about a Dr. Schachter?
21 A. I don't know him personally, but he's
22 also a recognized scientist.
23 Q. Well-regarded?
24 A. Yes.
25 Q. Independent of the tobacco companies?

1 A. I don't know that.
2 Q. You're aware that -- well, certainly you
3 know that his intellectual contributions were
4 independent?
5 A. Yes.
6 Q. They were at this conference; right?
7 A. Yes.
8 Q. Presumably, invited to it; right?
9 A. Presumably.
10 Q. And so if you are inviting prominent
11 outside scientists to a conference to discuss
12 things like the role of nicotine, does that suggest
13 to you that it's an open subject for the scientists
14 to talk about and discuss?
15 A. Yes.
16 Q. Inside and outside the industry?
17 A. Yes.
18 Q. Now, if I understood the relative import
19 of your testimony about this document was that
20 Philip Morris was saying things in private. Bill
21 Dunn was saying things in private that they weren't
22 disclosing to the world; right?
23 A. That is not what I said.
24 Q. Tell us what you said?
25 A. Philip Morris understood about nicotine

1 addiction, but this was not communicated to the
2 smokers.

3 Q. Okay.

4 A. There was no -- that the consumer was not
5 advised of what Philip Morris knows about its
6 products.

7 Q. And you talked specifically about this
8 document and Mr. Dunn's comment?

9 A. Well, that's just one of many documents
10 that deal with the fact that Philip Morris knew
11 that people smoked cigarettes for nicotine and
12 that, once they started smoking, they had
13 difficulty quitting, and that that behavior was
14 maintained by nicotine.

15 Q. Okay. You have seen this book before,
16 haven't you? Smoking Behavior: Motives and
17 Incentives, by William Dunn, compiled by William
18 Dunn.

19 A. Yes, I have seen it.

20 Q. Okay. Now, what this is, this is the
21 companion to the speech that is set out in Motives
22 and Incentives; right?

23 A. I'll accepted that.

24 Q. Well, if we turn to the last page of the
25 document Mr. Thomas showed you, it says, "This is

1 the end of my presentation. If you have been
2 intrigued by any of these ideas, I recommend
3 recently published volume entitled Smoking
4 Behavior: Motives and Incentives, a compendium of
5 papers presented at the St. Martin conference
6 published by V.H. Winston & Sons; correct, Doctor?
7 A. Yes. Yes.
8 Q. And that is this book; right?
9 A. Yes.
10 Q. Okay.
11 Now, let's look at this book. Does this
12 book -- in fact, would you tell the jury where this
13 book came from?
14 A. This book came from the Portland State
15 University library.
16 Q. In fact, it's due back March 11th; right?
17 A. Yes.
18 Q. I'll have you off by then. I promise.
19 This book was edited by William Dunn,
20 Junior; right?
21 A. Yes.
22 Q. Would you like to step down or could you
23 see the Judge's monitor?
24 A. I can see it.
25 Q. Okay.

1 Let's look at what it says. First, let's
2 just kind of walk through the Table of Contents.
3 Well, no. Actually, let's defer that and see who
4 these people are.

5 Preface. The third paragraph. "In
6 January, 1972, a representative group of life,
7 behavioral and social scientists convened on St.
8 Martin Island of the Lesser Antilles to reflect
9 upon human cigarette smoking behavior. It was
10 hoped that such a conference would redirect the
11 scientific community's interest to the fundamental
12 motivational question which has gone unanswered
13 since Clark Hull posed it a half century ago, and
14 which has not been given the priority it deserves
15 during the past decade."

16 The next page, "This, Then, is the
17 question that was put to the St. Martin conferees:"

18 Can you see that?

19 MR. THOMAS: Excuse me, counsel. Can we
20 have a side bar?

21 THE COURT: Yes.

22 I need to take this up on the record in
23 chambers. While we are away with counsel, feel
24 free to stand and stretch, jurors. We will be
25 back shortly.

* * *

(Whereupon, the following proceedings took place in chambers, outside of the jury's presence, as follows:)

* * *

THE COURT: Go ahead and state your objection.

MR. THOMAS: The objection, Judge, is to hearsay. This is a document which has not been marked or previously disclosed or discussed between the parties. And it appears that what he is doing and intending to do is to read passages of it. And Plaintiff moves to prevent introduction of this hearsay evidence before the jury.

MR. COFER: It's not offered for the truth. It's offered for what was said. And impeachment doesn't have to be listed as an exhibit.

Yesterday, under Mr. Thomas' questioning, the witness said that there were all sorts of things going on in Philip Morris they did not disclose. This will show they did, in fact, disclose it in the public literature, to the scientific community, and in fact in the Portland

1 State University library.

2 MR. THOMAS: Well --

3 MR. COFER: It's also an ancient
4 document.

5 MR. THOMAS: Excuse me.

6 THE COURT: Go ahead, Mr. Thomas.

7 MR. THOMAS: In regard to the first item,
8 which is it goes to some of what was said, I
9 don't think that is a separate evidentiary path.
10 So, I guess what I'll do is deal with it as if it
11 is impeachment. It's not a prior inconsistent
12 statement.

13 It is instead something that Philip
14 Morris contends was said and released to the
15 public. But that is not what this witness
16 described yesterday as something that was done in
17 secret.

18 He said that was -- and he just was asked
19 it in the foundational questions in regard to
20 this document, which was that is what Dunn said
21 in the conference. Not said to smokers by Philip
22 Morris.

23 This is not and I don't believe it was
24 represented as an internal secret document. It
25 was, and by that I mean my exhibit which, by the

1 way, I couldn't find and I wanted to bring it
2 here.

3 MR. COFER: I'll go get it for you.

4 MR. DUMAS: I'll get it.

5 MR. COFER: It was on my chair. Sorry.

6 MR. THOMAS: Okay.

7 The document itself, which is in evidence
8 and was testified to, since I was the one that
9 made the remark about the conference, I read it,
10 as did Mr. Cofer, and he used it as a thematic
11 connection between our presentations. And it was
12 that they had a conference at this tropical
13 place, and here is what was said.

14 The book itself is hearsay statements
15 that Dunn made in terms of the compilation, but
16 what he's doing is going into hearsay statements
17 that Dunn made away from the conference that
18 incorporate another layer of hearsay statements
19 from other people who were apparently the authors
20 whose work was compiled in their presentation of
21 this book.

22 THE COURT: Okay.

23 Are you finished?

24 MR. THOMAS: Yes, ma'am.

25 MR. COFER: First of all, it's not being

1 offered for a hearsay purpose. It's being
2 offered to show that it was said. Circumstantial
3 evidence of participants states of mind.

4 It is also offered to rebut the testimony
5 and the inference and the theme of yesterday
6 afternoon's examination which was Philip Morris
7 said one thing in public and something else in
8 private. The lack of this information, deceived
9 smokers, like Jesse Williams, causing him to keep
10 smoking which resulted in his addiction and
11 death. It is directly probative of that.

12 In addition, Dr. Benowitz is familiar
13 with this book before he testified yesterday
14 afternoon.

15 Now, it would be an exception to the
16 hearsay rule if it were being offered for the
17 truth of the matter asserted. But, in fact, it
18 is an ancient document, but it is not being
19 offered for that purpose. It is being offered to
20 rebut the claims and testimony of Plaintiffs that
21 Philip Morris was saying one thing in private and
22 something else in public and was specific
23 reference to what happened at the St. Martin
24 conference with respect to nicotine, who was
25 there, what they had to say, who expressed what

1 views, and were those disclosed to the public,
2 the scientific community and to the lay public.
3 It is directly probative.

4 THE COURT: What seems to me the best
5 analytical tool to resolve this problem is by
6 reference to our rule of evidence about
7 impeachment with a learned treatise. When an
8 expert is on the witness stand, to the extent an
9 expert acknowledges a document is reliable and
10 the content of the treatise document is
11 authoritative, it can be used for purposes of
12 impeachment and not for substantive evidence.

13 Mr. Cofer is asserting that the content
14 of this book is usable essentially in the same
15 light, to impeach the witness's account that
16 certain things were said in private that were not
17 said in public and to demonstrate through this
18 book that certain things were in fact said in
19 public that there may be an inference only said
20 in private.

21 The issue about whether the exhibit or
22 the examination should be precluded because it
23 was not a marked exhibit I think is resolved by
24 determining whether this is proper impeachment
25 material. If it's proper impeachment material,

1 then that was reserved to both sides. Those
2 types of documents need not be marked in advance.

3 So, the real question is is this a proper
4 method of impeachment? If it's not offered for
5 its truth, it's not hearsay.

6 So, the hearsay objection is overruled.

7 If it's offered to show there was a
8 disclosure of some form which might be
9 inconsistent with the witness' account of what
10 was disclosed in private, that sounds like
11 impeachment to me.

12 What am I missing?

13 MR. THOMAS: Well, it seems like the
14 method used is to take a book and, because it's
15 mentioned in an exhibit, to bootstrap the book
16 into something which is material to impeach in
17 regard to what is contained in the document.

18 That was not something that was -- I
19 think I wrote it down. I hopefully got it
20 clearly. It was not said to smokers.

21 THE COURT: Right, but you're narrowing
22 the application of the witness's testimony. And
23 he's entitled to take a different tact to what
24 the witness's testimony was yesterday and to
25 attack it, with any reasonable construction of

1 the witness's testimony, not just your narrow
2 application and argument about it right now.

3 That Dr. Dunn wrote one thing in a memo
4 that you used with the witness in the jury's
5 presence and that the jury might have inferred
6 from that evidence this was part of the secret
7 inner workings of Philip Morris' non-publicly
8 disclosed work may in fact be what they think.

9 That Dr. Dunn made an additional public
10 pronouncement, for lack of a better word, by
11 publishing this compendium of information may or
12 may not refute on the merits that inference.

13 But it seems to me an appropriate and
14 fair way to impeach the weight of which is left
15 to the jury.

16 Now, to the extent the form of questions
17 counsel think may be misconstrued by the jury to
18 elicit substantive evidence, I'll give a limiting
19 instruction, as you object along the way.

20 But I think this is proper impeachment,
21 and, therefore, the objection about it being
22 hearsay and not being disclosed on an exhibit
23 list are overruled.

24 MR. THOMAS: Could the request for the
25 instruction be one made now so that I don't get

1 in a situation where I have to pop up and request
2 it in front of the jury?

3 THE COURT: Well, if what you are
4 requesting is: "Jurors I'm overruling Mr.
5 Thomas' objection. I'm allowing Mr. Cofer to
6 examine the witness about this book for its
7 bearing, if any, on the extent to which Philip
8 Morris made public versus private disclosures of
9 information, but you're not to consider the
10 content of the book as substantive evidence of
11 the truth of those statements," if that is the
12 kind of instruction you are talking about, I'll
13 clarify that.

14 MR. THOMAS: Yeah. The only thing that
15 might be confusing is that I don't think they
16 ever heard an objection.

17 THE COURT: Well they know there's and
18 objection.

19 MR. THOMAS: Okay.

20 MR. GAYLORD: I don't want to jump into
21 the issue that I'm not really involved in, but it
22 strikes me, as a practical matter, it might make
23 sense that we could see the proffer first before
24 they are done so that we know whether there is
25 any objection to make or whether we care about a

1 limiting instruction.

2 MR. THOMAS: I would like to not have to
3 be in a situation where what we are about to do
4 for the last part of the morning is to see the
5 works of these other authors read into the
6 record.

7 THE COURT: Mr. Cofer is making a proffer
8 for a specific purpose, and that is to show
9 public versus private disclosure and not for the
10 purpose of the underlying truth of the
11 disclosure.

12 Correct, Mr. Cofer?

13 MR. COFER: That's correct, Your Honor.

14 THE COURT: All right.

15 I'll instruct the jury on a limiting
16 basis in that regard.

17 Do you want to show him quickly what
18 those are so we can avoid another trip to
19 chambers?

20 MR. COFER: Sure.

21 What I'm going to do is run through and
22 tell the jury the list of who all was there, and
23 you'll see there is quite a roster of outside
24 folks, which you'll recognize, including some
25 from the University of Oregon Medical School.

1 I'll then run through the Table of
2 Contents, which will address the issues raised
3 yesterday substantively, including the Cold
4 Turkey In Greenfield, Iowa, a Follow-Up Study,
5 which is the subject of another document which
6 was a secret confidential document that Benowitz
7 said was never released.

8 I will then go through and just pull a
9 couple of statements, for example, published by
10 Dunn, you know, as a result of the Philip Morris
11 CTR conference apparently and other statements,
12 but frankly aren't really helpful to my client
13 except to show that the client was funding and
14 publishing this to the outside world.

15 In agreement with these investigators, it
16 is my basic premise that one of the many reasons
17 people smoke tobacco is that it contains
18 nicotine.

19 Here's one on EEG studies. This report
20 confirms and extends results of earlier study
21 demonstrating marked differences in brain wave
22 patterns between smokers and non-smokers.
23 Clear-cut relationship between pattern of the EEG
24 and degree of cigarette smoke activity.

25 For example, human smokers can and do

1 adjust the dose of nicotine he takes into his
2 mouth very suddenly.

3 That will give you a flavor.

4 MR. THOMAS: Well, I see the flavor.
5 And, Judge, just I don't mean to belabor the
6 point, but the impeachment -- excuse me, the
7 impeachment here as articulated by the Court is
8 to show that, in fact, Philip Morris made
9 disclosures of these things.

10 THE COURT: Not just privately.

11 MR. THOMAS: Not just privately.

12 At some point it becomes confusing and
13 rises to the 403 level for Mr. Cofer to draw
14 attention to the fact that this compilation
15 includes work by other non-PM people that are
16 included in a book that --

17 THE COURT: I agree. I simply can't take
18 time now outside the jury's presence to review
19 every single proposal you make. I'll make
20 rulings.

21 If the point of this proffer that is
22 allowable is to show the extent to which Philip
23 Morris was making disclosures other than
24 privately, Dunn is Philip Morris, Dunn has
25 published a compendium. So, your hanging Dunn

1 yesterday with this kind of secret disclosure, he
2 gets to show that Dunn did something less secret
3 or more open. But not to the degree of detail
4 where we are going to get into substance about
5 truth where this risk of I think a legitimate 403
6 objection becomes greater.

7 I think the more you stay to general
8 topics that are discussed and attributable to
9 Dunn publicly the closer to the appropriate
10 point.

11 MR. THOMAS: Well, now that I see how
12 this is going, I withdraw the request for the
13 limiting instruction at this time, and I will
14 abide by the Court's line, to the extent that I
15 see it, because, of course, I want to stand up
16 and object as little as possible.

17 So, I'm going to have to figure out where
18 you are crossing the line, and I guess we are
19 just going to have to work it out.

20 THE COURT: All right. No request for
21 limiting instruction. None will be given.

22 MR. COFER: The one thing I would ask is
23 if we are going to break for the lunch hour, I
24 think this is --

25 THE COURT: We're going to finish it.

1 But the longer you're going to talk --

2 MR. COFER: This is going to be awhile.

3 THE COURT: No, it's not. You are going
4 to go in topic form. You are not going to read
5 lots of detail of experts because you will cross
6 the line to the other side. So you can show that
7 there was a public disclosure by Dunn of a
8 variety of topics, and we'll get it done in ten
9 minutes.

10 MR. THOMAS: I just want to raise one
11 more thing for your information and maybe mine,
12 too.

13 My understanding is we don't
14 intentionally leave a question pending and then
15 say oh, woman, we are going to take our lunch
16 break now.

17 MR. COFER: I understand that.

18 THE COURT: Here's the deal, Mr. Cofer.

19 MR. COFER: I have got the deal, I think.

20 THE COURT: Here's the deal. There is no
21 reason a witness cannot speak with anyone the
22 witness chooses on the witness stand. There is
23 also no reason the questioner can't inquire on
24 the witness stand of what the witness talked
25 about over the break. But there is a question

1 pending. There is going to be no consultation.
2 That is how the rule works.
3 MR. COFER: Thank you.
4 MR. DUMAS: Your Honor, this is off the
5 record.

6 * * *

7 (Whereupon, the following proceedings took
8 place in open court, in the presence of the
9 jury, as follows:)

10 * * *

11 THE COURT: Jurors, we are going to go
12 about ten minutes more to wrap up this line of
13 questioning, and then we'll take the lunch break.

14 Mr. Cofer.

15 MR. COFER: Thank You, Your Honor.

16 BY MR. COFER:

17 Q. Doctor, I think where we were when we
18 left was I was going to ask you about the book
19 Smoking Behavior: Motives and Incentives. I think
20 you identified for the jury that this was obtained
21 from the Portland State University library. It's a
22 compendium compiled by editor William Dunn of
23 Philip Morris. And what it does is it's a
24 compendium of topics presented at the St. Martin's
25 conference we discussed yesterday. Is that

1 correct, sir?
2 A. That's correct.
3 Q. Let's first just run through briefly to
4 see who the non-Philip Morris people were at this
5 conference. Are you familiar with an Albert Damon,
6 Harvard University?
7 A. No.
8 Q. Harvard, is that a recognized college and
9 school here?
10 A. Yes.
11 Q. University of Michigan, Edward Domino?
12 A. I know Edward Domino.
13 Q. Columbia University, Lucy Friedman?
14 A. I do not know Dr. Friedman.
15 Q. But Columbia, again, is recognized?
16 A. Yes.
17 Q. University of Pennsylvania, Evelyn
18 Harner?
19 A. I don't know the person.
20 Q. Let's see. One more. University of
21 Oregon Medical School, Joseph Matarazzo. Are you
22 familiar with him?
23 A. No.
24 Q. Okay. Let's just look at the topics that
25 were in this book published as a result of the St.

1 Martin conference. Introductory remarks,
2 Neuropsychopharmacology of Nicotine and Tobacco
3 Smoking, by Edward Domino. Behavioral effects in
4 animals. Neurological Effects in Animals. Do you
5 see that?
6 A. Yes.
7 Q. Next chapter. Further Observations on
8 Nicotine as the Reinforcing Agent in Smoking, by
9 Jarvik. Right?
10 A. Yes.
11 Q. Are you familiar with Jarvik?
12 A. Yes.
13 Q. Who is he?
14 A. He is a researcher currently at UCLA who
15 has done much research on nicotine effects on
16 smoking over the years.
17 Q. Respected researcher?
18 A. Yes.
19 Q. Independent of the tobacco companies?
20 A. Yes.
21 Q. Chapter 4, Nicotine Related Neurochemical
22 Chemical Changes: Some Implications for
23 Motivational Mechanisms and Differences. Do I read
24 that correctly?
25 A. Yes.

1 Q. Talks about brain -- what was that
2 word -- Indoleamine?
3 A. Indoleamine.
4 Q. Okay. Cellular Specificity of
5 Nicotine-related central Effects?
6 A. Yes.
7 Q. That is brain affects; right?
8 A. Yes.
9 Q. Five additional characteristics, EEG
10 difference between smokers and non-smokers. This
11 is that brain wave stuff you talked about yesterday
12 and today; right?
13 A. Yes.
14 Q. Where you can measure brain wave patterns
15 of smokers and non-smokers to show that the brain
16 waves are effected by cigarette smoking; right?
17 A. Yes.
18 Q. 6. Some Recent Observations Relating to
19 Absorption of Nicotine from Tobacco Smoke. A
20 Comparison of the Effects of Nicotine Inhaled in
21 the Form of Tobacco Smoke with the Effects when it
22 is Injected Directly into the Bloodstream.
23 Did I read that correctly?
24 A. Yes.
25 Q. Effects of pH on Nicotine Absorption from

1 the Mouth.
2 Did I read that correctly?
3 A. Yes.
4 Q. This again goes to your testimony about
5 the speed in which nicotine is delivered when
6 inhaled, as opposed to injected. Do you recall
7 that?
8 A. By this, what do you mean?
9 Q. By the first one, comparison of the
10 effects of nicotine inhaled in the form rather than
11 when it's ejected?
12 A. Yes.
13 Q. I think Mr. Thomas talked about how it
14 gets to the brain from the lungs?
15 A. Yes.
16 Q. Personality. Well-known experimental
17 methods and conceptual methods as applied to the
18 study of motivation of cigarette smoking, by Bill
19 Dunn; right?
20 A. Yes.
21 Q. Personality and the maintenance of
22 smoking habit, by Eysenck?
23 A. Yes.
24 Q. I have no clue what Nesbitt's Paradox is,
25 but it's in here.

1 The Relationship of Smoking and Habits of
2 Nervous Tension; right?
3 A. Yes.
4 Q. And is this -- can you see this on the
5 monitor -- 11. Effects of Nicotine on Avoidance,
6 Conditioned Suppression and Aggression Response
7 Measures in Animals and Man; correct?
8 A. Yes.
9 Q. 12, The Effects of Smoking on Mood
10 Change; right?
11 A. Yes.
12 Q. 13, General Comments on Problems of
13 Motivation Relevant to Smoking; right?
14 A. Yes.
15 Q. Three mechanisms of motivating
16 self-administrations; right?
17 A. Yes.
18 Q. 14, Some Commonalities Among the
19 Preceding Reports of Studies on the Psychology of
20 Smoking; right? Correct?
21 A. Yes.
22 Q. 15, Smoking Attitudes and Practices in
23 Seven Preliterate Societies?
24 A. Right.
25 Q. Yes.

1 16, Cold Turkey In Greenfield, Iowa: A
2 Follow-Up Study, Francis Ryan.
3 Yesterday, we had a document that talked
4 about the Cold Turkey study in Iowa; right?
5 A. Yes.
6 Q. Do you remember answering questions from
7 Mr. Thomas about that?
8 A. Yes.
9 Q. Dr. Ryan was the one who prepared that
10 document; correct?
11 A. Probably. I forget.
12 Q. And that is here in this box.
13 17, Motivational Conflicts Engendered by
14 the Ongoing Discussion of Cigarette Smoking;
15 correct?
16 A. Yes.
17 Q. 18, Smoking Behavior 1953 and 1970: The
18 Midtown Manhattan Study; right?
19 A. Yes.
20 Q. 19, Ethological and Biochemical
21 Interactions and Their Relationships to Smoking;
22 right?
23 A. Yes.
24 Q. Some Effects of Nicotine and Glucose, for
25 example; right?

1 A. Yes.

2 Q. 20, The Social Sciences and the Smoking
3 Problem; right?

4 A. Yes.

5 Q. And, finally, 21, The Motivational
6 Factors in Cigarette Smoking: A Summary; correct?

7 A. Yes.

8 Q. And the last thing I'll do with this is
9 point out, because I don't think I got this, the
10 last sentence in the preface, the conference was
11 sponsored by the Council for Tobacco Research,
12 U.S.A. Inc, William L Dunn, Junior, December 1972;
13 correct, sir?

14 A. Yes.

15 Q. Now, let me just ask you this. You have
16 seen this book before?

17 A. Yes.

18 Q. Were you aware of it before your
19 testimony yesterday?

20 A. Yes.

21 Q. You recognize some of the researchers in
22 this book; correct?

23 A. Yes.

24 Q. You recognize at least some of them as
25 prominent researchers in the field of nicotine

1 smoking and addiction; correct?

2 A. Yes.

3 Q. Do you consider this book to be reliable,
4 authoritative work?

5 A. Well, it depends on what you mean by
6 reliable or authoritative work. It's a proceeding
7 of a meeting.

8 Q. Right.

9 A. So, it is people's papers that they
10 presented. It's not peer reviewed. It's useful.
11 The quality of the research probably varies a lot
12 from paper to paper.

13 Q. Right.

14 A. So, what I would say is that it probably
15 has some validity as any another conference
16 proceeding. It's a summary of the papers that were
17 presented.

18 Q. Yet, it is common practice to have
19 conferences where you invite people from different
20 disciplines with an interest and expertise in a
21 field to come and collaborate and discuss issues of
22 interest; right?

23 A. Yes.

24 Q. And it's common to then memorialize those
25 discussions in some sort of compendium; correct?

1 A. Yes.

2 Q. Many times it doesn't actually become a
3 hard-bound book; right? This time it did.

4 A. Right.

5 Q. Now, when you review the substance of
6 this work, do you consider this the sort of
7 materials that a person such as yourself would rely
8 on in reaching opinions and forming the conclusions
9 about the matters we have discussed in your
10 testimony?

11 A. Well, it would be information that I
12 would want to consider. Whether -- I have to make
13 a judgment about the quality of each paper.

14 Q. Right.

15 A. So, by authoritative, I wouldn't accept
16 as what's said as being fact, but I certainly would
17 take it for what it shows.

18 Q. So, it's something that you wouldn't
19 necessarily agree with everything said in here,
20 but, looking at the way this was prepared, the
21 people who attended, this is a work that you would
22 rely on in terms of reaching opinions; correct?

23 A. I would use papers from that. I would
24 read it, yes.

25 Q. Okay. From this book; right?

1 A. Yes.

2 MR. COFER: That is all I have before the
3 lunch break, Your Honor.

4 THE COURT: All right.

5 Jurors, thank you for your attention this
6 morning. We'll take up for your purposes at
7 1:30. Notes here. Don't discuss the case.
8 Watch your step. You are free to go, folks.

9 * * *

10 (Whereupon, the jury exited the courtroom.)

11 * * *

12 THE COURT: Anything for the record from
13 Plaintiff?

14 MR. THOMAS: I don't believe so.

15 MR. COFER: Nothing, Your Honor.

16 THE COURT: Thank you.

17 We are off the record. 1:30.

18 * * *

19 (Whereupon, the proceedings adjourned for the
20 lunch recess.)

21 * * *

22

23

24

25

15 Dated this 26th day of February, 1999 at
16 Portland, Oregon.

21
22
23
24
25

